



# VOICE OF THE DIABETIC

A SUPPORT AND INFORMATION NETWORK  
*The Diabetes Division of the National Federation of the Blind*

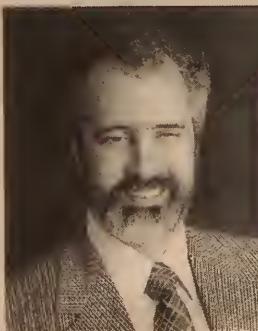
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## Update: Insulin vial configurations would eradicate errors

by Ed Bryant



Ed Bryant, editor, *Voice of the Diabetic*, works with the Food and Drug Administration in striving to change insulin vial configurations.

In my article "Insulin in uniquely shaped vials would minimize dispensing and dosing errors" published in the Summer 1992 edition of the *Voice*, I wrote about the need for uniquely shaped insulin vials so that blind and sighted diabetics can identify types of insulin by touch. I was amazed that insulin manufacturers and/or the Food and Drug Administration (FDA) have not accommodated insulin users with packaging designed for greater safety. The discussion analyzed the problem and outlined why insulin vials should be differentiated by shape. The article ended with a letter I sent May 15, 1992 to Dr. David Kessler, Commissioner of the Food and Drug Administration.

I received a response from the FDA

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regarding my letter to Dr. Kessler which appears below along with my reply. As you will read, the pertinent parts of the Code of Federal Regulations (CFR) are currently under review.

Howard Spungen  
Department of Human & Health Services  
Food & Drug Administration  
Rockville, MD  
June 25, 1992

Mr. Ed Bryant  
First Vice President, Diabetes  
Division  
National Federation of the Blind

Dear Mr. Bryant:

This is in reply to your letter of May 15, 1992 addressed to Dr. Kessler proposing packaging of insulin products in different shaped vials to enable both sighted and blind diabetics to readily distinguish between the different kinds of insulin.

All the insulin products currently manufactured are required to be packaged in cylindrical vials. The requirements in 21 CFR Part 429 for other vial shapes, such as you suggest, apply to insulin products that are no longer manufactured. These regulations are currently under review.

The regulation revision process is a long one and includes not only internal agency review, but review by the Office of Management and Budget. In addition, the revised regulations must be published as a proposal for public notice and comments must be reviewed.

It may be possible to provide tactile recognition of insulin by voluntary

agreement with the manufacturers prior to amending the regulations. If so, the tactile features could be codified in the regulations at a later date as requirements.

We are interested in your suggestions and would appreciate further discussion on the best way to address your concerns. Among other things, we want to consider not only different vial shapes to make the products distinguishable by the blind or visually impaired, but also alternatives that may accomplish the same purpose. Using tactile features on labels, such

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## Update: Insulin vial configurations would eradicate errors

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as raised bumps, has been suggested. If a tactile feature is used on labels, what coding method should be used, braille or another system; and should the labels be used on all vials, or only by special request? If a system is used that categorizes insulin into short, intermediate, and long acting, what products should be put into each category? We appreciate your interest in the subject, and we would welcome further comments by you or any other interested party. You may contact me at (301) 295-8101.

Howard S. Spungen  
Consumer Safety Officer  
Product Surveillance Branch

•••

Diabetics Division  
National Federation of the Blind  
Columbia, MO  
November 16, 1992

Howard S. Spungen  
Consumer Safety Officer  
Product Surveillance Branch  
Food and Drug Administration  
5600 Fishers Lane  
Rockville, MD 20857

Dear Mr. Spungen:

I sincerely appreciate your response to my May 15, 1992 letter to Dr. Kessler in which I inquired about packaging insulin in differently shaped vials to minimize dispensing and dosing errors. As you are aware, the design of insulin containers is an extremely important issue for blind as well as sighted diabetics.

Because current regulations mandate insulin be contained in the same size and shape of cylindrical vials, diabetics often ask me how to differentiate between different types of insulins. Moreover, health professionals and rehabilitation teachers, concerned with diabetes management and/or education, contact me seeking help on behalf of their patients and clients with regard to the most effective and safest way to determine packaging contents without being able to read the print label. Until changes are made in vial configuration or an acceptable alternative, I am able to offer only homemade solutions to this vexing problem. Because this situation must be rectified, I am delighted to know that you, an officer of the FDA, are concerned with the packaging of insulin vials.

As you may know, the Centers for Disease Control estimates 14 million people in the United States have diabetes. It is believed that 2.5 million diabetics use insulin. Although I haven't found a definitive figure indicating the number of blind diabetics who use insulin, it's known that an estimated 15,000 diabetics become blind each year and that all sighted diabetics are at risk of becoming blind as a result of their diabetes. As the population ages, the number of insulin users continues

to increase. This massive number of consumers should be able to efficiently and quickly use needed medications without assistance. They ought to be able to determine what is in the insulin container for obvious safety reasons.

One time when I purchased insulin, the pharmacist inadvertently sold me the wrong type although I was told that I had received the kind ordered. Most pharmacists are careful to identify products for the blind but unfortunately errors do occur. Because I am a cautious person, I enlisted the aid of a friend to double-check the container. However, it wouldn't occur to many customers that they ought to double check their insulin purchases. Incidentally, to identify insulin, it is my practice to place two rubber bands around the box immediately upon purchase. When I remove the vial from the box, I use duct tape to mark one type of insulin. Unfortunately, rubber bands break and tape can — and does — become detached. Other blind diabetics use various methods of marking their vials, although no homemade method, including mine, is foolproof.

After receiving your letter, dated June 25, 1992, I incorporated your questions into an informal survey which I sent to people all over the country. Nineteen percent of the respondents are sighted, 81 percent are blind, and 87 percent are diabetic. Of the total, 19 percent are rehabilitation professionals, both sighted and blind, who work with blind diabetics.

The survey solicited the following responses. Ninety-four percent of the respondents felt a change of some sort is needed. Fifty-six percent preferred a change in vial shape; 38 percent preferred the addition of tactile markings. Of those preferring tactile markings, most did not specify their preference regarding location on vials or on labels. Twenty-nine percent indicated they would like a combination of distinguishing vial shapes and tactile markings. Regarding the use of colored labels, 94 percent gave negative replies or no reply at all. Only six percent indicated preference for the use of colored labels. I believe these figures provide ample evidence that most diabetics responding to the survey would like to be able to distinguish different kinds of insulin by touch. I received a myriad of suggestions regarding tactile cues which will be relayed later in this letter.

One response, in particular, stands out. I quote from a letter received from a blind rehabilitation teacher who has insulin-dependent diabetes.

*Braille is not a good option. There are simply too many blind diabetics who are tactually very impaired by neuropathy to make this a reasonable system. ALL markings on insulin bottles must correspond exactly to the print initials that diabetic consumers*

*are already using to identify their insulin vials (R, N, L, etc.). Many of us look back on the days when bottles were different shapes to indicate types of insulin and wish it were so again. Those kinds of firm, standard tactile cues are good ones even for those individuals with very severe neuropathy. Skip the color on the labels. Skip the braille or non-braille dot system on vials or labels. Do not use any raised letter system that does not conform to the traditionally accepted print labels on insulin.*

After reviewing the suggestions, I've determined that a combination would satisfy the needs of the majority. The combination would be special-

ly shaped vial shoulders to distinguish the duration of insulin (short-acting, intermediate-acting, or long-acting) and tactile cues on the bottle and/or label to determine the source of the insulin. (Examples of sources are: Human, Human Semisynthetic, Purified Pork, Pork, Beef/Pork, and Beef).

Regarding differently shaped containers, in my letter to Dr. Kessler, I proposed that short-acting insulins be packaged in cylindrically shaped containers, as they are now; intermediate-acting insulins be packaged in cylindrically shaped containers except that cross-sections (shoulders) be rounded squares; and all long-acting insulins be packaged in cylindrically shaped containers with hexagonal shoulders. This reflects package modality widely used years

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## Free prescription drug samples

by Donovan Cooper



Donovan Cooper, president, NFB Diabetics Division, explains how consumers can save money on prescription drugs.

Have you noticed the high cost of prescriptions these days? Unless you are on Medicaid, belong to a Health Maintenance Organization (HMO), or have a rich uncle who buys your prescriptions for you, these high costs have undoubtedly come to your attention.

People who are on Medicare generally do not get their prescriptions paid for by the Medicare program. The exception is that kidney transplant patients can receive reimbursement for some of their out-of-pocket prescription costs from the Renal Medicare program for one year after their transplant. People who have non-HMO private insurance plans such as Blue Cross/Blue Shield can usually receive reimbursement for a portion of each prescription. Blue Cross/Blue Shield offers, under most of their plans, an alternative where the subscriber can obtain prescription drugs from a design-

nated mail order service for a small per-prescription fee. These small fees are also a common feature of HMO plans.

Even people on Medicaid may incur prohibitively high costs because Medicaid does not pay for all prescription drugs. Many of the newer drugs are not on the list of medications for which state Medicaid programs will pay.

One way or another, most of us end up paying significant amounts for prescriptions even when we need them infrequently. People who take more prescription drugs generally have greater out-of-pocket costs.

There is one way that we can significantly reduce our expenditures on prescriptions, particularly when it comes to new drugs. The drug companies distribute large quantities of their newer products to doctors' offices. This is done for promotional purposes. The important thing to remember is that when your doctor writes a prescription for you, ask him or her if they have any free samples of that drug in their office. Often the answer is "yes" and your doctor will readily give you some of the samples. When it comes time for a refill, again check with your doctor's office to see if they still have free samples in stock.

It is recommended that you use some discretion in pursuing this option. You should not try to hoard the drugs you get from your doctor because you might hold them beyond their expiration date and do yourself harm by taking expired drugs. Also, your doctor will want to make these free samples available to as many patients as possible and your self-restraint will help. Nevertheless, you may want to avail yourself of these free samples and you should feel free to do so. It will almost certainly save you money.

## Update: Insulin vial configurations would eradicate errors

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ago that was approved by the FDA and implemented by insulin manufacturers. Such packaging would enable ALL persons to readily distinguish between different insulins based on the general categories of duration. You probably know that most diabetes doctors now recommend multiple injections of mixed insulins. Because of many injections of *mixed* insulins, the chance of error is greatly multiplied by current packaging.

Consider the errors that occur because insulin is not currently packaged in uniquely shaped vials. For example, like most Type I diabetics, I occasionally experience insulin reactions. I recall one incident during which I consumed simple sugar to combat the low. While still a little disoriented, I foolishly attempted to draw insulin. I wasn't cognizant enough to recognize what I was doing. Fortunately, when I came out of the low, I hadn't made the injection because I could not determine with certainty the amounts or types of insulin I had drawn. If the insulin vials had been of different shapes, I would have been far more likely to have drawn the cor-

rect types of insulin.

I recently received a copy of a letter sent to Dr. Kessler which provides another example.

*We are the parents of one of the diabetics who almost lost his life because he accidentally got the bottles mixed up and took an overdose of the fast-acting kind of insulin. He is a business man and of sound mind. It was very early in the morning, [he was] getting ready for work and experiencing a slight reaction and got the bottles mixed up. Had they been shaped differently somehow to distinguish the two different types [that he takes], he might have avoided the horrible convulsions. Had it not been for the quick action of his wife calling 911, he might not be with us today. We're asking you to consider a packaging change in insulin bottles — different shapes for different types — for the benefit of the sighted and the blind. By the way, our son is not blind. A life is more valuable than the*

*extra cost in a production change. With the volume of insulin produced, this shouldn't be a problem. [I] can't understand that this hasn't been done a long time ago.*

The bottom line should not be cost but SAFETY. The well-being of millions of Americans is at stake. During a phone conversation with William Gierke, Manager of Pharmaceutical Package Engineering, Eli Lilly and Company, he said, "I really don't think the extra cost would be a factor."

Regarding tactile markings on vials or labels, my suggested combination includes tactile cues on labels or containers to indicate source of insulin. Tactile markings may be incorporated in the vial designs or on the labels. If tactile markings aren't incorporated in design of the vials, obviously a very durable labeling material would be necessary. Labels containing tactile markings should be of such durability as to withstand the insulin user's repeated touch. Because of refrigeration, the label is subject to exposure to moisture. The embossing should be sturdy enough to withstand moist conditions. Because many diabetics experience neuropathy in the hands, tactile markings must be sufficient enough in size and texture so persons with nerve damage can readily determine the source of insulin without assistance.

Ideally, tactile marking could be embossed on the glass container over which a standard vial label could be attached. Providing that the label material doesn't obscure the readability, this might be an efficient way of making tactile markings — and the vital information the cues contain — available to all insulin users. Tactile cues on *labels* would be as efficient.

Whichever mode is used, it should be simple to accommodate the majority of diabetics. Although tactile markings could be employed to indicate other information, such as date of expiration, the first priority of the use of such markings should be to indicate source in my combination suggestion. It makes little difference whether the insulin container or the label has the markings as long as reliable tactile cues are present.

Tactile markings must have height, width and texture. Any shape or combination of shapes would suffice. As an example of tactile markings that are quite readable by diabetics with severe neuropathy, I am enclosing the tactile cue portion of an instrument used to hold insulin vials. The whole instrument is used by blind diabetics to independently draw insulins. When you examine item number one, you will find one raised tactile cue on one end, and two cues on the opposite end. Used for mixing insulins, this device holds two vials of different insulins. The tactile cues differentiate between the insulins. Such cues are

excellent examples of the kind to be used on a prototype vial or label.

The National Federation of the Blind is a strong advocate of using Braille as a method of reading. However even though my organization promotes the use of Braille, many blind diabetics with severe nerve damage cannot use Braille as indicated in previously quoted portions of a letter I received. Braille is too small and lacks the dimensions needed by many persons with nerve damage. Item number two contains sample letters in standard and Jumbo Braille. Comparing item number two to item number one, it can be determined that the tactile markings in item number one are more readily distinguished.

Another type of tactile cue can be seen in item number three. As you'll note, this is a raised line check used by some blind persons. Although these kinds of tactile markings are helpful to many blind persons, I feel such lines are inferior to item number one as a potential use to mark labels or vials. Like Braille, the lines lack sufficient tactility.

If vial shoulders indicate the duration, and tactile markings on containers or labels indicate the source, six different tactile cues will be necessary for the six courses of all insulin. All six cues would be used under the short-acting category of duration. Five cues would be used to indicate source under the intermediate-acting category and three cues would be necessary under the long-acting category. A possible fourth category of duration would be "Fixed Combinations" that are used in an insulin pen. That category requires three cues.

Under the short-acting category, six tactile markings are needed for the following sources: Human, Human Semisynthetic, Purified Pork, Pork, Beef/Pork, and Beef. Except for the one indicating Pork, the same tactile markings would be used under the intermediate-acting category. Under the third duration category, long-acting, Human, Beef/Pork, and Beef insulins would use the same tactile cues as above. "Fixed Combinations," the possible fourth category, would use three cues for Human, Human Semisynthetic, and Purified Pork.

Regarding the shape of tactile cues that might be used on vials or labels, I suggest the following: ROUND, SQUARE, RECTANGLE, TRIANGLE and COMBINATION. The chart below shows sources and suggested respective tactile cues.

SOURCE OF INSULIN	TACTILE CUE(S)
Human	ONE ROUND tactile cue
Human Semisynthetic	TWO ROUND tactile cues
Purified Pork	ONE SQUARE
Pork	ONE LONG RECTANGLE (vertical or horizontal)
Beef/Pork	TRIANGLE and LONG RECTANGLE
Beef	ONE TRIANGLE

(Continued on page 20)

### Drug appears to control diabetes

#### Treatment kills attacking blood cells.

BOSTON (AP) — A genetically engineered drug that hunts down renegade blood cells appears to relieve juvenile diabetes when given in early stages of the disease, its developers say.

The treatment has produced remissions ranging from six months to a year in five of the first eight people treated.

"It's an attractive idea," commented Richard Jackson of the Joslin Diabetes Center in Boston. "If we had something like this that's effective in inducing remissions, it could be very useful."

Juvenile diabetes results from a misguided attack by white blood cells on insulin-producing cells in the pancreas. Victims need injections of insulin to replace what their bodies cannot make.

The experimental treatment attempts to kill the attacking blood cells. This allows the body to resume making insulin with whatever pancreatic tissue has not already been destroyed.

The medicine is called an interleukin-2 fusion toxin. It joins a natural human protein with diphtheria poison.

French doctors treated eight people with the substance. Five have been able to produce enough insulin so that they need only minimum insulin injections and their blood sugar levels returned to normal.

"The signals are very encouraging," said Jean Nichols of Seragen Inc., a biotechnology company in suburban Hopkinton that makes the drug. Much more study needs to be done

to assess the long-term effectiveness of the approach, which has not been approved for routine use. Doctors intend to test it on 30 more patients. In future work, they will compare it against insulin therapy.

The treatment is also being tested as a therapy for rheumatoid arthritis and some forms of cancer.

Nichols said the preliminary results were outlined last week at the TPI International Conference on Monoclonal Antibodies in London. They were presented by Christian Boitard of Necker Hospital in Paris.

All the patients were treated within four months of their diagnosis of juvenile diabetes. By this time, at least 95 percent of their insulin-producing tissue had been destroyed by the disease.

Nichols said there were no side effects except one fever and limited rash.

Jackson said an even more important use of the treatment could be in preventing diabetes. Doctors can now give blood tests to people who have the disease in their families to spot those likely to develop diabetes within three to four years.

Insulin injections are the mainstay of therapy for juvenile diabetes, but they make people susceptible to heart attacks, kidney failure and blindness. Seragen's development of the fusion toxin has been paid for mainly by Boston University.

(Note: This article appeared May 7, 1992, in the *Columbia Daily Tribune*, Columbia, Missouri.)

## Juvenile diabetic retinopathy: the salt connection

by W. Rex Hawkins, M.D.

Recent studies suggest that the excessive use of dietary salt hastens the progression of juvenile-type diabetic retinopathy. Dietary salt plays a role, it now seems, in the vasoproliferative stage of the retinopathic process.

**Vasoproliferation** is the term used by ophthalmologists to designate the formation of new blood vessels on the surface of the retina. The new blood vessels are fragile and poorly formed. They can be, and often are, the source of bleeding within the eye.

The bleeding extends into the vitreous, or jelly portion, of the eye, and the resulting visual disability is quite pronounced. Scarring develops within the vitreous following the bleeding and detachment of the retina often results.

Diabetic retinopathy with vasoproliferation is depicted in figure one.

**Understanding vasoproliferation:** Several studies have shown that the new blood vessels are a response to inadequate oxygenation within the peripheral portion of the retina. Initially, in the diabetic retinopathy process, capillaries within the peripheral, or outermost, retina become obstructed by red blood cell aggregates. That process is depicted in figure two.

Following the collapse of capillaries within the peripheral retina, new blood vessels develop near the nervehead as a compensatory mechanism. These vessels proliferate in a bizarre configuration on the surface of the

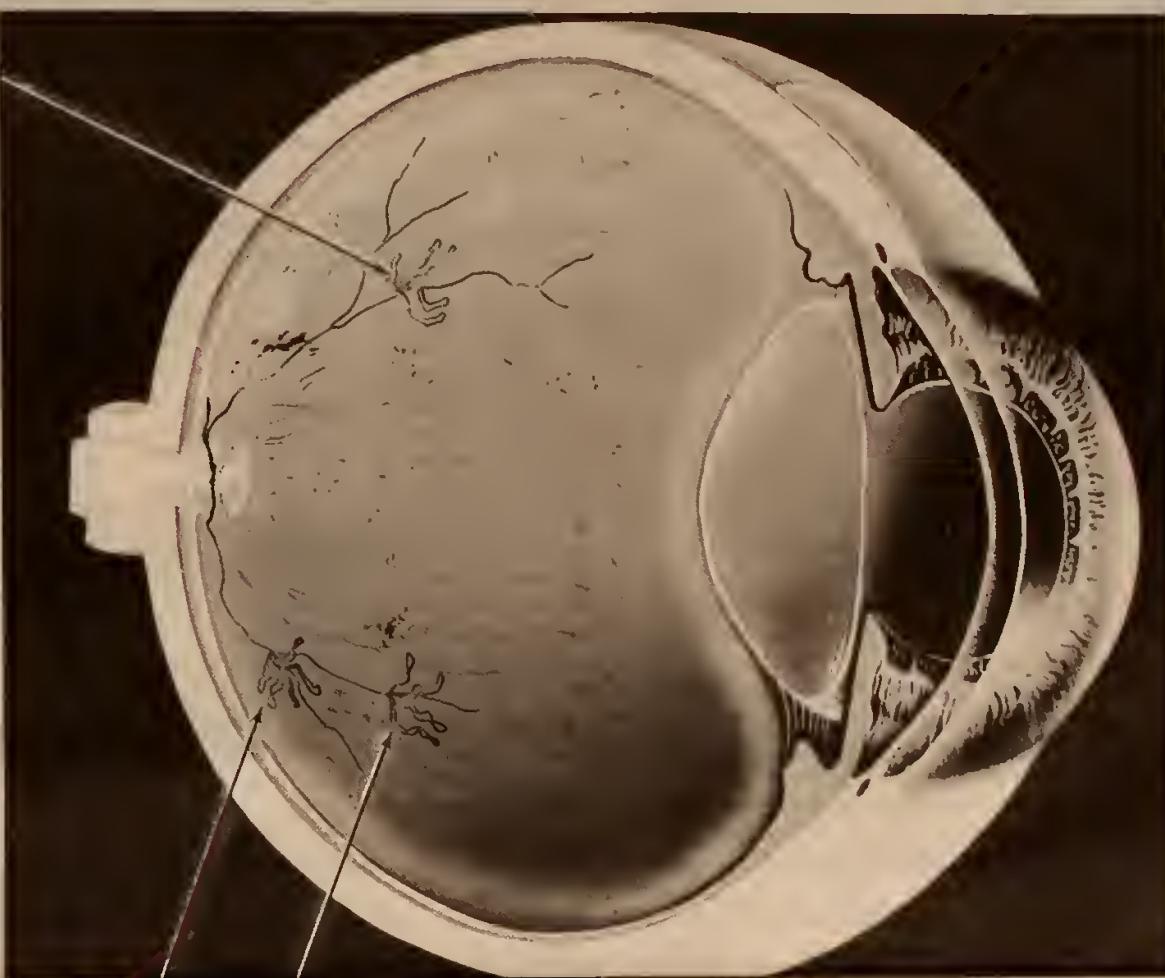


Figure 1. Cross sectional view of eye with proliferative diabetic neovascularization (arrows).

retina and serve no useful purpose.

**The role of dietary salt:** Ocular specialists have long wondered what causes the closure of capillaries within the peripheral retina. More recently, clues regarding that process have become apparent. First, it was noted that the red blood cells of patients with juvenile-type diabetes exhibit an abnormal tendency to stick together. The explanation for that phenomenon, it was learned, lies within the serum or

liquid portion of blood.

Apparently, the albumin molecule, which is suspended within serum, becomes excessively "salted" for some individuals. The "salted" albumin distorts the delicate electrolytic balance within the serum and interferes, in turn, with the repulsive force that red blood cells have for each other. The red blood cells clump together to such a degree that some capillaries within the peripheral retina become completely occluded, as figure two demonstrates.

**Salt usage of juvenile diabetics:** A recent study by the author has shown that many juvenile diabetics tend to use excessive amounts of dietary salt. A dietary history was obtained for 32 young adults with juvenile-type diabetic retinopathy and compared with 15 young adults with diabetes and no indication of retinopa-

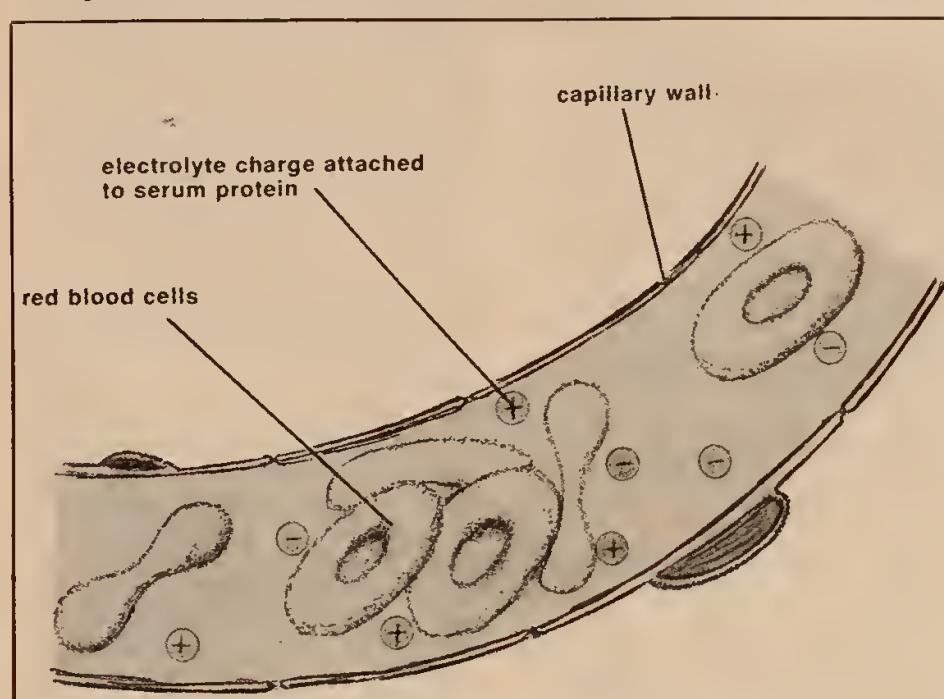


Figure 2. Depiction of microclot within retinal capillary.

thy. For both groups the duration of the clinical diabetes was similar. The results of that survey appear in table one. The excessive use of dietary salt was evident for the group who had developed juvenile diabetic retinopathy, while moderate to light use of dietary salt was the custom for those who had not yet developed diabetic retinopathy.

**Understanding sodium (salt):** Sodium is added to most foods that are processed or prepared. For instance: salt (sodium chloride) is used in canning. Baking powder (sodium) is used to leaven breads and cakes. Brine (sodium and water) is used in the processing of luncheon meats, frankfurters, and pickles. Sodium bicarbonate is employed in soft drinks to provide fizz. Alkalizers, laxatives, and pain medications often contain sodium.

**Salt control:** A major revision of dietary habits becomes necessary when salt is restricted. Firstly, salt cannot be used as a sea-

soning agent, either at the table or in the cooking. Such a diet requires, furthermore, the avoidance of prepared foods such as canned goods and processed meats. Meats and vegetables are encouraged, but such foods should be fresh, not processed. The diet is not caloric restrictive. It is well balanced, providing all of the essential proteins, fats, carbohydrates, minerals, and vitamins.

**What to expect:** Not known at this point is just how effective salt control can be in the prevention of juvenile-type diabetic retinopathy. Obviously, such data will require many years to collect and process. For now the admonition is clear: Patients with juvenile diabetes should emphasize fresh foods in their diet and avoid salt as a seasoning agent. A reduced susceptibility to diabetic retinopathy can be anticipated.

Table one  
Dietary Salt Comparison for Diabetes Patients, 18 to 38 age group,  
with and without Diabetic Retinopathy

salt usage	with diabetic retinopathy	without diabetic retinopathy
none	0	3
light	12	10
moderate	13	2
heavy	7	0
	32	15

## The mysterious ten percent



Marc Maurer, president, National Federation of the Blind, addresses the Federation at its 1993 annual convention.

An Address Delivered by  
**MARC MAURER**  
 President, National Federation of the  
 Blind  
 At the Banquet of the Annual  
 Convention

Charlotte, North Carolina, July 3, 1992

The National Federation of the Blind is not an organization speaking for the blind. It is the blind speaking for themselves.

• National Federation of the Blind  
 1800 Johnson Street  
 Baltimore, Maryland 21230  
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Almost without exception, the physical characteristics of existence are recognized because they fit a familiar pattern. It is not that those events which fail to conform to the framework of the generally accepted belief system are repudiated; they are not perceived at all. Reality, as we know it, is not made up of all discernible phenomena. Instead, it is the interpretation of those incidents that our understanding has permitted us to observe.

Those in the field of education tell us that students must be familiar with ninety percent of the subject matter of a class if learning is to occur. What is true in the classroom is also valid for less formal settings. Ordinarily, we comprehend only that which we already largely know.

In the history of science the matrix of belief is called the paradigm, and the pithy admonition to the scientist is to "save the phenomena." There is a powerful urge to include in scientific experiments only those facts which fit the theory being tested. When the facts do not demonstrate what they were expected to show, those conducting the examination are tempted to dismiss them as insignificant. Of course, the integrity of the scientific process does not permit such behavior. If science is to make progress, it

must account not only for convenient results but for all observed results — the scientists must save the phenomena. However, if the experiment which might have been performed doesn't fit the paradigm — the structure of belief, the framework of recognition — it will never be conducted at all. Those facts which might have been observed will not be seen because nobody will look.

Sometimes at the conscious level, and sometimes without knowing it, society divides all knowledge into two major categories — those matters which can be studied and those which are beyond exploration. These two segments of knowledge are fundamentally distinct because in those which are regarded as proper for study, society believes that there is something to learn. In those which are regarded as sacrosanct, it is presumed that study is irrelevant because knowledge is (if not complete) sufficient for decision making on all practical questions. However, even when the study is intense and the receptivity is great, learning is limited by the ninety percent factor. The inevitable result is that some of the knowledge we regard as settled is necessarily incomplete and, therefore, incorrect.

Incorporated within the theories devised to explain all known information, there are assumptions. When new evidence becomes available, the underlying theory which explained the knowledge of the past is not ordinarily discarded. Instead, it is altered or expanded to include the new factor without, however, changing or eliminating the assumptions upon which the idea is based. Each time an additional factor is incorporated, the theory is doctrine to make the new information fit. This process brings to mind the folksy aphorism, "It ain't what you don't know that hurts you so much, but what you do know that just ain't so."

What does all of this mean for us — for the largest organization of blind people in the nation? One of the accepted doctrines throughout history has been that it is essential to be able-bodied to be productive. The blind are not in this group. Hence, we are told that we have very limited capacity. Whether in the writings associated with the field of work with the blind, in the great body of general world literature, in the visual images presented for entertainment, or in the public mind, the incompetence of the blind has become an almost universally accepted part of the canon of knowledge. So completely fixed is this idea that further examination is presumed by many to be irrelevant.

Our own experience refutes that commonly held belief. Thousands of us have demonstrated that we are able to handle the ordinary job in the ordinary place of business, and (as with the sighted) some blind people demonstrate extraordinary ability and make remarkable contributions. Nevertheless, the notion of the incapacity

of the blind remains firmly embedded in the thinking of millions.

In the face of so much evidence, how can this be? We human beings observe what we already know; we learn only when we believe that further study is warranted. Evidence which does not fit the established pattern is not rejected; it is never perceived at all. Even when it is known that there is something to learn, ninety percent of the subject matter under examination must be understood before learning — recognition of the unfamiliar — becomes possible. But, the ninety percent factor leaves the other ten percent available for discovery. This ten percent — the unknown ten percent, the vital ten percent, the mysterious ten percent — is an opportunity waiting to be made.

We the blind must accept the challenge of identifying the necessary ten percent, the essential elements for our integration into society; we must internalize the learning; and we must assist the public to comprehend what blindness really is by making the normality of blind people sufficiently familiar so it can be readily understood — so it can become a part of the mysterious ten percent. We must encourage the exploration, channel the thought processes, and focus the inquiry for a new understanding. What we are seeking is an alteration in the fundamental rules governing the acceptance and participation of the blind in every part of the culture. This will be good for the blind, but we will not be the only beneficiaries — so will everybody else. Our society will, for the first time, be using the collective talents of an entire class of people, and we will have a deepened understanding, sharing the needs and aspirations and being part of the force which makes our civilization what it is.

Who is responsible for achieving this objective? You know as well as I — those who have come together in the largest organization of the blind in the nation, the tough-minded individuals who have gathered here tonight to represent the blind from throughout the country, the members of the National Federation of the Blind.

Just over half a century ago, at a meeting in Wilkes-Barre, Pennsylvania, the National Federation of the Blind was brought into being. Dr. Jacobus tenBroek, a blind professor and one of the most scholarly and dynamic individuals of the twentieth century, along with a handful of others from seven states, founded this nationwide organization of the blind and thereby initiated the movement that would bring us independence. We the blind declared that the responsibility for our future belonged not to others, but to us. We intended to take a hand in shaping our own destiny.

In view of the circumstances which existed in 1940, such boldness required both courage and nerve. Almost no blind person had entered the competitive job market. Schools for the blind provided some education, but the officials who set the tone in those institutions had little expectation

that blind students would emerge able to accept the challenges of higher education or employment. There were some libraries and a few books, but the volumes collected were meant primarily for recreation, and they were often hard to get. A number of sheltered workshops had been established, which offered employment in simple, repetitive tasks at extremely low wages to a small percentage of the blind; but a productive career with the responsibilities of citizenship was virtually unknown.

Despite the dismal prospects, a new and exciting possibility was inevitable from that first meeting of the National Federation of the Blind. The promise we made to ourselves that day has never changed, and the faith that we pledged has always been kept. No longer is our future determined entirely by others. Instead, we who are blind (acting individually and through our own organization, the National Federation of the Blind) play an increasingly important part in creating and determining the standards applicable to the conduct not only of our own daily affairs but of everything dealing with blindness. In creating the National Federation of the Blind (our own vehicle for self-expression and collective action), we have decided that the subservience which has so often been a part of existence for the blind must and will be eliminated. We insist on equality; we yearn for independence; we strive for full participation. We come together to achieve unity, to disseminate information, to provide inspiration, and to take concerted action through the organized blind movement — the National Federation of the Blind.

In 1940, books about the blind were few, and those that had been written (even those which, by the standard of their time, were regarded as progressive) depicted the blind as much more limited than was true or than we would hope to find today. One such volume (written, interestingly enough, by the famous blind historian William H. Prescott and printed in 1858) gives a picture of mixed images. Entitled *Biographical and Critical Miscellanies*, this volume includes an article which comments about the condition of the blind. Prescott recommends that improvements be made for the blind, but he believes the possibilities for full integration are unattainable. Although what Prescott says seems archaic and old-fashioned by the standards of 1992, his writing must be judged by the criteria of its day. In 1858 (in the context of the times, the technology then existent, and the attitudes and working conditions of pre-Civil War America) the article is more positive than negative. In 1940 (although many, especially those in work with the blind, would probably have denied it) Prescott's views were the generally accepted standard — but they were no longer viable. In 1992 (despite the fact that the Prescott thesis has glimmers of positive philosophy) we should be able to put it behind us, viewing it as

nothing more than a quaint element of the past. Unfortunately, such is not the case. While the present day language of the professionals in the blindness system is much more ours than Prescott's and while progress has been made, too many of the Prescott ideas still linger, some of them so deeply embedded in the public mind that they have not even emerged into the mysterious ten percent of thought which can be examined and reconsidered.

But before saying more, let me give you excerpts from the Prescott article. It is not only reminiscent of the America of a century and a half ago but useful as a touchstone for perspective today.

Immured within hospitals and almshouses [Prescott says], like so many lunatics and incurables, they [the blind] have been delivered over, if they escaped the physical, to all the moral contagion too frequently incident to such abodes, and have thus been involved in a mental darkness far more deplorable than their bodily one.

This injudicious treatment [Prescott continues] has resulted from the erroneous principle of viewing these unfortunate beings as an absolute burden on the public, utterly incapable of contributing to their own subsistence, or of ministering in any degree to their own intellectual wants. Instead, however, of being degraded by such unworthy views, they should have been regarded as, what in truth they are, possessed of corporeal and mental capacities perfectly competent, under proper management, to the production of the most useful results.

These are quotations from the 1858 publication. To protect the blind from the misfortune of the hospitals and institutions for the insane, Prescott recommends the establishment of asylums for the blind. The description of the asylum indicates that it fulfills the functions that we would associate with a school for the blind, a home for the blind, and a sheltered workshop. The workers in one of these asylums, says Prescott, produced a number of articles including:

cotton and linen cloths, diapers, worsted net for fruit-trees, basket-work of every description, hemp and straw door-mats, saddle girths, rope and twines of all kinds, netting for sheep-pens, fishing nets, beehives, mattresses, cushions, feather beds, bolsters, and pillows.

There has been no necessity [Prescott continues] of stimulating their exertions by the usual motives of reward or punishment. Delighted with their sensible progress in vanquishing the difficulties incident to their condition, they are content if they can but

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## ADOLESCENTS WITH DIABETES AND NONCOMPLIANT BEHAVIORS

### Why Should You Refer Them to the Intensive Inpatient Program at Cumberland Hospital for Children and Adolescents?



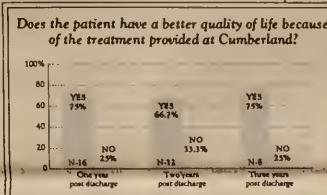
**RESEARCH SUGGESTS** that treatment in the Cumberland Hospital Diabetes Management Program benefits patients for a minimum of three years after discharge—that their diabetes is better controlled and that their social behavior is significantly improved. Treatment at Cumberland often breaks the cycle of frequent emergency room visits, hospitalizations and school absences.

In a survey tabulated in December 1991, parents of patients treated by Cumberland Hospital in 1988, 75 percent said that their child had "a better quality of life because of the treatment provided three years previously by Cumberland Hospital."

The 1991 study continues with the work of a 1989 published report on 80 patients with diabetes treated at Cumberland in 1987 and 1988. In that study of patients one to three years post discharge from Cumberland, 73 percent said the patients are better and 23 percent indicated that they were the same.

CUMBERLAND'S PROGRAM specializes in the difficult-to-manage adolescent with diabetes. Almost all patients have failed in traditional programs—inpatient and outpatient—and have had life-threatening complications despite efforts to properly manage their diabetes.

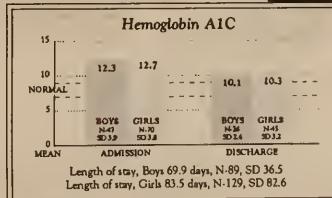
The December 1991 outcome study examined 221 adolescents with diabetes admitted to the hospital from 1986 through July 1991. A sampling technique was used to target specific subgroups and to evaluate patient progress.



The 1991 study contacted parents of former patients one, two and three years post treatment at Cumberland to determine the long term benefits. These patients were treated at Cumberland in 1988, 1989 and 1990, and the results are far more favorable than the 1989 published study.

One year post discharge from Cumberland, the patients were hospitalized a mean of 10.8 days (N=15, standard deviation 20.3), two years post discharge and mean of 12.2 (N=13, standard deviation 13.8), and three years post discharge a mean of 7.3 (N=8, standard deviation 9.2).

SCHOOL ATTENDANCE is another good indicator of the success of an adolescent diabetes treatment program. In the 1989 study of 54 patients, patients missed an average of 40 days during the 12 months prior to treatment at Cumberland and 23 days during the 12 months after treatment.



The 1991 study of patients one, two and three years post treatment was able to obtain limited information on school attendance. According to the study, patients during the 12 months after treatment missed an average of 8.87 days (N=8), and 14 days two years post treatment (N=5). School attendance data on only two patients treated three years post was obtained. They missed 5 and 10 days respectively, of school during their third year after treatment.

#### CONCLUSION

This study implies that patients benefit from treatment at Cumberland Hospital for a minimum of three years post discharge. This is demonstrated by a number of factors. For more detailed information about this study or any of Cumberland's Inpatient Programs, call the Information Office at 1-800-368-3472.



**Cumberland Hospital**  
for Children and Adolescents  
New Kent, Virginia

## The mysterious ten percent

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place themselves on a level with the more fortunate of their fellow-creatures. And it is observed that many, who in the solitude of their own homes have failed in their attempts to learn some of the arts taught in this institution, have acquired a knowledge of them with great alacrity when cheered by the sympathy of individuals involved in the same calamity with themselves, and with whom, of course, they could compete with equal probability of success.

Such is the writing about blindness of the historian Prescott, and in the record of our development, it is well worth having. The asylum for the blind is far superior to the almshouse, and Prescott is urging that the talents of the blind be used to a greater extent than they had been. If the characterization of the blind by Prescott were merely a page from the past, it would be interesting and instructive but not a matter for concern. However, the language employed in his description is still encountered today, and this brings it from the archives to the battlefield of current ideas. Even now in 1992, blindness (we are told in some quarters) is a calamity; blind people are so cheered by productive work, alongside those who are in a similarly unfortunate plight, that there is no necessity of stimulating them with the usual monetary rewards of productive labor; the blind cannot compete on terms of equality with others but need a special place, where they have the possibility of being competitive — not with those in the regular labor market, of course, but only against other blind people.

How often have we been told by the managers of sheltered workshops that the reason for operating such institutions is to give blind people something useful to do, which will provide a sense of purpose? The ongoing labor of blind workers, which produces the goods and generates the money, is not really "work," we are told, but "therapy." And what are many of the sheltered workshops if they are not special places where blind people "cheered by the sympathy of individuals involved in the same calamity as themselves" can compete with equal probability of success? This is not the way it should be; this is not the way it need be; but this is the way many of the managers of the shops want it to be and have made it be.

The description of the asylum for the blind brings to mind a much more modern incident. In 1991, less than one year ago, a blind man, a member of the National Federation of the Blind from the state of Michigan, became employed in the printing shop for a large public school system. He got the job with the help of our National Treasurer, Allen Harris, and through Job Opportunities for the Blind, the nationwide program operated by the Nation-

al Federation of the Blind in partnership with the United States Department of Labor. This blind man is being paid six dollars an hour for his work. During the eight years prior to his employment in the print shop, he was given what certain rehabilitation officials called "meaningful employment" at a work activity center. The pay stubs he collected from the work activity center confirm a story which is almost unbelievable. For sixty long hours one week this blind man performed the work he was assigned. His take-home pay for those sixty hours was less than five dollars. The philosophy of rehabilitation in the 1990s is (at least in some situations) not as constructive as the philosophy of Prescott in the 1850s. At least the wages in the blind asylum were closer to those in the regular work force of that day than this man's pay in the work activity center was to what he now makes in the print shop. He is the same man. He has the same capacities in the print shop that he had in the work activity center. In short, he was taken advantage of, abused, and exploited — not because he deserved such treatment but because those who dished it out thought they could do what they did and get away with it. It is to fight this very kind of degrading injustice that we have formed the National Federation of the Blind — and fight it we will until we have crushed it out of existence.

At the time of the founding of the National Federation of the Blind (despite such advances as had been made), blindness was still regarded as a personal tragedy. The incapacity of the blind was presumed. Blindness might be used to evoke pity, pathos, or amusement, but blind people were not taken seriously.

In W. C. Fields' 1934 film, *It's a Gift*, blindness is used to get a laugh. A blind man of venerable age and irascible temper, Mr. Merkle, enters a grocery store operated by Fields. In finding his way to the counter, this blind character clumsily and furiously destroys a display of light bulbs — note the symbolism. Merkle orders chewing gum, and when it is finally brought to him, he (playing upon the exaggerated notion that the blind are demanding, touchy, and cantankerous) tells the grocery store operator that he is not prepared to carry it. He wants the gum delivered. After the rampage is over, someone asks who the blind man was. Fields replies, "He's the house detective over at the hotel."

Blind people do sometimes stumble and bump into things, but this is not the norm (not if there has been training, not if there has been reasonable opportunity). And some of us are irascible and demanding, but I doubt that the proportion is higher for us than it is for the sighted. The exaggeration of the 1934 movie is unreasonable and intolerable because the damaging pic-

ture of the blind is unrealistic, degrading, and disgraceful. In 1934 such a depiction could be made without a protest because the blind had not yet organized. The popular belief at that time was the blind were not (and could not be) successful. Consequently, the occasional demonstration to the contrary was dismissed (as it is even sometimes today) as an exception.

But that was 1934, and this is 1992. That was before the National Federation of the Blind. Today we have come together in our tens of thousands from every corner of the nation — and when blindness is discussed, we intend to have a word — in fact, in certain instances we intend to have the last word.

When ABC produced its program "Good & Evil" in the fall of 1991, the blind reacted with decision and strength. ABC made fun of us. George, the blind character who was said to be a psychologist, acted as though he had not merely lost his eyesight but also his brains, his sense of proportion, and his self-respect. He gently embraced a coat rack under the mistaken impression that it was a woman. He fondled a male but wasn't aware that the individual with whom he was taking such liberties was a man until his hands found their way below the belt. He smashed glass objects or windowpanes in almost every scene but seemed almost blissfully unaware that he had caused any harm. The pictures were accompanied by so-called humorous dialogue about the blind developing such keenness with their other senses that they could compensate for the loss of sight.

ABC officials seemed unable to understand why we objected to this travesty. When we received an advance copy of the first episode of the program, we urged ABC to rethink its position, but network officials dismissed our objections. They apparently harbored the opinion that we of the National Federation of the Blind were simply oversensitive and touchy, not to mention helpless and unable to do anything about what they were doing. We responded to this brush-off by telling them that such behavior would not be tolerated. Our message was articulated with logic and reason, but ABC continued to ignore us. Working through the National Federation of the Blind, thousands of blind people protested by letter and telephone. Our words became not only brief but blunt: "Stop 'Good & Evil.' Stop it, or face the consequences." They didn't — and we acted. We picketed, contacted sponsors, talked with the media, distributed leaflets, and alerted the public.

In less than two months the program was off the air. Some ABC officials complained privately that the National Federation of the Blind had stopped the show. When it comes to programs belittling the blind, the National Federation of the Blind is a real showstopper. We intend to evaluate the underlying assumptions of those who make pronouncements about us;

we will set our own standards of fairness with respect to the images projected about us; and we will take our message to the public — including the television networks. Let those who think they can ridicule us and disregard our opinions reflect on the fate of "Good & Evil."

The presentations about blindness in film and on television that we have been discussing are not revolutionary. They are a reiteration of what people have always thought about the blind. If the film producers and television screenwriters were told that they should study blindness, they would wonder why. Blindness doesn't change, they would think. It is a severe physical deprivation with known, predictable consequences. There isn't anything to study.

But this is the general public. What about the professionals in the blindness field? There are institutions which tell us that they have made a thorough examination of blindness and that they are the experts. Consider these quotes from a letter distributed to the public by the New York Lighthouse for the Blind. As you will see, the letter shows that the Lighthouse believes that to the extent a person has eyesight, life is worthwhile. To the extent that eyesight has been lost, there are crushing difficulties. The only way (they say) to circumvent the problems is to seek their counseling and advice. This material is not from 1858 or 1934. It is less than five years old. Here are the recommendations of the Lighthouse experts:

If [they say] you thought blindness was something that happened to "the other guy," you should realize blindness is something that could happen to you.

Imagine how you would feel if you were told by your doctor that eyeglasses won't help, that you are, indeed, losing your sight.

How long would you be able to work? How long would you be able to drive? How could you enjoy an active retirement?

Every day, you notice it getting worse. You become less and less able to take care of yourself. Your relationship with your family becomes strained. They want to help, but they don't know how. Unable to work. Unable to play. Unable to read, or even watch TV. You become more and more cut off from the people, places, and things that filled your life before.

Fortunately, there is a place to turn.

Since 1906, The Lighthouse — The New York Association for the Blind — has been helping people cope with the fear and the isolation accompanying their loss of sight — as well as teaching them new home and job skills.

There's a lot you can do [the letter continues]. Not just to help those less fortunate than yourself, but also to support an organization that someday might come to your aid, or to the aid of someone you love.

You'll help us promote more research on how to help blind people deal with their disability.

They need your help.

And you should give it to them.

Not just because it's the "right thing" to do.

But because someday it could be you.

Or someone you love.

Tucked away among the negative images in this agency's letter is this statement:

Blind people are not different from the rest of us. They are not "poor, unfortunate souls" with tin cups and pencils.

They are people like you and me. They have jobs, and families, and responsibilities. Like all of us, they want to lead productive, meaningful lives.

These are the only positive words in the entire document. Although they suggest that blindness may not be a complete tragedy, they are hardly believable when placed in the context of the statements that surround them. The blind are unable to work, unable to play, unable to have a fruitful retirement, unable to appreciate fully the society of family and friends, unable to read, unable to enjoy TV, and unable to care for themselves. Is such a picture realistic? Do blind people have jobs, play with the kids, read books, write articles and monographs, manage the responsibilities of family life, and participate in community activities?

When the Lighthouse declares that it wants to do "research on how to help blind people deal with their disability," what kind of research does it have in mind? Their letter, written in the late twentieth century, is, in many respects, worse than the literature about blindness produced over a hundred years ago. The outlook is one of despair; the prescription is for the managers of the asylum to take charge of the affairs of the blind; the method is scare tactics to frighten the public. The emphasis is not on the ability possessed by the blind but on the care others should devote to them. The decision-makers are not the blind but the custodians of the blind. If this is all that their research is capable of producing, I ask you, what good is it? If the point of their effort is to argue that blindness is an unmitigated disaster, let them leave us alone. We can do without their help. This representation of blindness is not

true but false — not reality but fantasy — not an examination of fact but a reinforcement of ancient and time-worn fiction. The New York Lighthouse for the Blind is accredited by NAC, the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, the most divisive institution in the field of work with the blind today. Is it any wonder that the Lighthouse view of blindness is negative?

We are not opposed to competent research about blindness conducted by competent researchers. Blindness has been misunderstood for thousands of years, and it should be studied. What we find objectionable is the ancient body of myths and misconceptions dressed up in the clothes of modern scientific experimentation. Not only do we welcome researchers who come with an open mind, but we are increasingly participating in that research. Indeed, the cutting edge of scientific advancement involving blindness must necessarily include the organized blind. There is no other way for the misconceptions of the past to be identified and eliminated.

Whether the researchers come from within the field of work with the blind or from some other establishment, the results of their experimentation about blindness are, to say the least, unusual when they do it without consulting the blind. Blindness is often regarded as equivalent to darkness, even though the two are not the same. Recently, at the Baylor College of Dentistry, in Texas, a study was conducted dealing with the lowly salivary gland. It seems that the amount of saliva produced by a human being is directly related to oral hygiene. If you don't produce enough saliva, you won't have a clean mouth. You may have thought that, interesting though saliva experiments may be, they aren't related to blindness. Consider, however, these statements from a document describing the study:

The purpose of this study [says the report] is to examine, for the first time, the relation between visual impairment and reduced salivary flow. Normal salivary flow is necessary for healthy teeth and intraoral tissues. Research has shown that salivary flow decreases dramatically in dark environments. Thus, it appears reasonable to hypothesize that blind people might suffer from decreased salivary flow and oral health problems.

This is what the report says, and it boggles the mind. Remember that they are talking about you and me. Do you think that those of us in this room who are blind have drier mouths or less spit than those of us who are sighted? The questions that come to mind while contemplating this study are legion. How did they find out that salivary flow decreases in the dark? If you keep your mouth shut (I presume it is dark in there), will the absence of light reduce your salivary flow? Do the

people who talk a lot, especially in well-lighted places, produce more saliva than others? What other characteristics were the subject of this investigation? I was tempted to ask, "Does your hair grow faster at night?" or "What happens to it if you put on a hat?" There are some things worth studying in the dark, but I had never thought of salivary flow as one of them. I have not yet received the results of the Baylor College study, but if their hypothesis were correct, it would follow that blind people suffer from bad teeth. Perhaps we do, but I doubt it. In short, "spit on it."

Blindness is sometimes blamed for more than it deserves. Of course, magazine publishers are in business to sell magazines, and the melodramatic (some believe) will increase circulation, but melodrama should not masquerade as truth. An article in the September 10, 1991, issue of *Woman's World* describes the experiences of a young blind woman. It purports to be a direct quote, but I wonder if it is taken out of context or selectively edited to emphasize the sensational. Here is what it says:

Sometimes I want to scream until I shatter glass. I want to take the heavy wooden post from my canopy bed and smash in the television screen. I want to hurl the television set against the wall and then storm through my neighborhood smashing everything.

Other times I feel like laughing out loud at something only I find funny. I want to whoop until I can't remember what it was all about.

My wildly swinging range of emotions are related [the grammar is theirs not mine] directly or indirectly to my blindness.

I am blind. After four years, I still have to repeat that uncomfortable statement to myself.

It wasn't until last year that I could bring myself to admit it.

Do you think this report in *Woman's World* truly represents the experience or the feelings of most blind people — even those who have been blind for only three or four years? Becoming blind can be extremely trying emotionally. Yet, we who are blind do not spend our days wanting to scream at the top of our lungs, fighting an urge to smash everything, or laughing uncontrollably at nothing. I am, of course, not saying that we lack emotion. We possess feelings and dreams in abundance, but they do not spring from the fact of our blindness. They are a part of our basic humanity. They live within us, and come from the heart. Blind people are not weird or peculiar — we are just blind, and we are not prepared (even if the magazine editors would like us to say so) to tolerate the assertion that we are somehow abnormal, idiotic, or subhu-

man.

Many thousands of letters come to the National Federation of the Blind each year. Some are dramatic; some are matter-of-fact; some are unassuming. Often those who see our public service announcements respond with requests for assistance. Reading between the lines, it is possible upon occasion to learn much from a very few words. Here is a letter, which I received less than six months ago:

I was watching TV one afternoon and saw a commercial. It was your commercial. I was just wondering what your organization is all about.

I am legally blind and have been since late December, 1983. I attended the Pittsburgh Guild for the Blind in 1986. I spent over a half year there.

I was watching TV, and I saw a commercial. It was your commercial. So I decided to write, and just find out what your organization is all about. Like what all do you do? So I was wondering if you could send me some information.

I was sent down to United Rehabilitation Services to get trained for a job. I think some blind organization was sending the work for me to do. But then they didn't send anything, so I sat there.

Sincerely,

Simple, straightforward, uncomplicated — direct language, eloquent. The woman who wrote became blind in 1983. Three years later, in 1986, she received training at the Pittsburgh Guild. After six months at the Guild she was sent to an agency to do a little work. The work didn't come. She sat there. In 1992, nine years after she became blind, she is still waiting — watching television and wondering what there is for her. How long does it take to crush the spirit or kill the dream? This woman's letter is not demanding, but the exact opposite. She wonders what our organization is about. The repetition of the tentative phrasing indicates that this woman does not wish to face one more disappointment. During the last nine years there must have been many, and she is almost afraid to hope. But she did not give up; she did write; and we did respond. Blindness should not mean (and it doesn't have to mean) interminable waiting, idle hours, and a place to sit while the rest of the world moves on. Training in the skills of blindness can be found; a job with all of the frustrations and joys that accompany it can be procured; and of greatest importance, there is hope for a better tomorrow.

This woman tells us, as we read between the lines, that the Pittsburgh Guild for the Blind has nothing to offer. This comes as no surprise since

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## The mysterious ten percent

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the current executive director is Richard Welsh, who also serves as one of the principal officers of the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (NAC), probably the most controversial and regressive agency for the blind of the twentieth century. Be that as it may, we have our own vehicle for collective action, and we know how to use it. The woman who wrote for information about our organization received encouragement and support. We will help.

I joined the National Federation of the Blind in 1969. The organization was different from anything I had ever encountered. It told me that blindness need not be a disaster, that it could simply be a characteristic, that it did not have to keep me from pursuing a career. I had reservations about it, but I hoped that the message was true — and I said that I believed. Even though I tried to accept the philosophy of the Federation wholeheartedly, my views about blindness today are not precisely the same as those I held in 1969 when I joined. Learning cannot happen all at once, and both individuals and organizations gain experience and understanding as long as they retain the flexibility of an open mind.

Shortly after I became a part of the National Federation of the Blind, several members of the organization, traveling by plane to a state convention of one of our affiliates, hotly debated whether a blind person could competently travel from one airport gate to another without a guide. I believed at the time (although I was a little nervous about expressing my opinion) that it was foolishness to maintain that a blind person could travel easily and gracefully through an airport without an escort. Some of my colleagues argued that modern travel skills could be as effective in an airport as anywhere else. They pointed out that blind people can get around with assurance in large cities. Why shouldn't the same principles apply to the airport?

We put the matter to the test. I sought assistance in traveling, and one of my colleagues struck out on his own. I don't suppose I need to tell you that he got to the next gate before I did. These days I travel routinely from one gate to another in busy airports without ever giving it a thought (sometimes with and sometimes without assistance). The point is that I can get where I want to go whenever I need to, and I am grateful to my Federation colleague for showing me that I could.

In 1940, Dr. Jacobus tenBroek had the inspiration and self-assurance to found the National Federation of the Blind. In 1952, Dr. Kenneth Jernigan first attended a National Convention of the organized blind movement. Fired with enthusiasm by Dr. tenBroek, Dr. Jernigan began to add his effort to the creation of the literature of indepen-

dence and to the building of the structure of self-organization that would forever change the fundamental meaning of blindness. Dr. tenBroek, the philosopher who could dream of a future unlike any previously contemplated, and Dr. Jernigan, the builder who carried the philosophy of independence to the rehabilitation establishment and to the blind of every state, came together to create a leadership both powerful and dynamic. Dr. tenBroek conceived the notion of equality for the blind; Dr. Jernigan popularized the idea and established a training center which incorporated it in the curriculum. Together these pioneers forged a gathering of energetic blind people dedicated to making the dream of independence become reality.

Although the belief system of the past may hold that there is nothing essential to learn about what blindness is or how to deal with it, this time-worn understanding of the capacity of the blind is no longer uncontested. We human beings ordinarily observe only that which we already know, and we learn only when ninety percent of what is presented is familiar. But this is not all. Learning cannot occur unless there is a teacher with the wisdom and the capacity to dream of the other ten percent. Those in the school systems, in the governmental and private agencies for the blind, and in the public at large can work with us to accelerate the achievement of independence for the blind, and increasingly this is precisely what has been occurring. But they cannot provide the inspiration and the dream — that must come from us. We will learn what we must, imagine a time when we have eradicated the misconceptions about the blind, provide an alternative explanation which is more complete than the misguided theories of the long ago, and teach the public about our basic normality. This is our goal, our mission, and our right.

If we cannot muster the courage, sustain the dream, or maintain the nerve, the loss will be unimaginable. But, of course, we will not fail. We have one another, and nobody — no agency for the blind, no magazine editor, no film producer, no so-called scientific researcher, no television network official — can prevent us from going the rest of the way toward freedom. We believe in one another; we have faith in the ability of our blind brothers and sisters; and we will share the burden that must be borne to bring true independence to the blind. Ninety percent must be known if learning is to occur. But there is the other ten percent, the mysterious ten percent, the vital ten percent — and we will supply it; we are the National Federation of the Blind. My brothers and my sisters, come! Join me and we will make it all come true!

## Ask Dr. James

by Ronald James, M.D.



Ronald James, M.D., long-term insulin-dependent diabetic, directs the Midwest Diabetes Treatment and Education Center, Columbia, Mo. Dr. James is also the Medical Director of the Central Missouri Diabetic Children's Camp Inc.

(Note: If you have any questions for Dr. James, please send them to the editor. The only questions Dr. James will be able to answer are the ones used in his column.)

### *What should a fasting blood sugar be? What should the blood sugar be two hours after eating?*

It is ideal for diabetics to have fasting blood sugars and blood sugars two hours after eating in the normal range. In many cases this is possible, in others not. In many type I diabetics there will be quite wide swings in the blood sugar, at least in part due to the lack of adequate insulin production by the pancreas. For these individuals, attempting to keep the blood sugar (fasting or two hours after meals) from being above normal may result in many insulin reactions. This may make it impractical to attain normal blood sugars all the time.

The range for normal fasting and two-hour post-meal blood sugars may vary from one laboratory to another depending on the method each laboratory uses to measure the sugar. I generally consider 70 to 110 mg% to be the normal range for fasting blood sugars and prefer that blood sugars not go higher than 120mg% two hours after meals, but this varies with the method being used.

The limits of the normal range for the methods you are using and how much you strive to achieve normal blood sugars should be discussed with your physician.

*I am a 24-year-old diabetic and*

*have been thinking about getting a tattoo. Friends tell me not to do this because I may have a slower healing process, but I am willing to take the risk. Should diabetes influence my decision as to whether or not I should get the tattoo?*

I have many patients who have tattoos and have had no particular problems because of them. If you do not have skin problems, do not have problems of poor circulation in the areas to be tattooed, and have your diabetes in good control, I would not expect you to have any more difficulty with a tattoo than any another person. However, if you do not meet these conditions, I would advise against getting a tattoo.

*I have been an insulin-dependent diabetic for over 28 years. My best control has taken place over the past six years, as I have been treated by an excellent endocrinologist who specializes in diabetes. Why has there been a dramatic weight gain with the increased control? When I changed from Pork insulin to Humulin insulin, I gained approximately 18 pounds almost immediately. Within two years after changing to Humulin, I began external insulin pump therapy and have attained remarkable control. With this control has come an additional weight gain of approximately 30 pounds over the years. Why is this?*

There are probably several reasons why you gained a lot of weight as your diabetes has come under good control. Weight gain in terms of gaining fat (not fluid) is a matter of taking in more food, measured as calories, than you burn for energy or lose as glucose in your urine. Many feel that good diabetes control increases the appetite, especially if it results in insulin reactions. This in turn may result in increased food intake. With improved control, you will spill less glucose in the urine. In addition there is now some evidence to suggest that the body is more efficient in its energy use when the diabetes is well controlled. All of these factors may result in a positive caloric balance which is stored as fat and results in weight gain.

To achieve improved diabetes control, the latter two factors must be accepted. Therefore, in order to lose weight or avoid weight gain the only solution is to take in less food, that is follow a diet lower in calories. This will probably require a decrease in your insulin doses in order to avoid too many insulin reactions.

## Guided by love

by Royanne R. Hollins



**Royanne R. Hollins, pictured with her guide dog Willow, describes the positive influences on her life.**

When I was nine, I was diagnosed with Type I insulin-dependent diabetes. At that age the diagnosis didn't seem very earthshaking because I did not have the knowledge I have now. The first major care giver in my life who helped manage my diabetes was my mother. She was strong when I was weak, she was knowledgeable when I was ignorant, and she was controlled when I was reckless. Most of all, she was caring when I no longer cared. She guided me in those early years with unending, unconditional love. I have been guided by her love.

Later, I had an experience that changed my future forever. I grew to know God's love. God is love and His love, like my mother's love, is unconditional. God has guided me for many years. All that I am, all that I do, and all that I want to be, I do for Him. I give my life over to Him again and again, asking to be used in a positive way. If that means experiencing complications of diabetes and turning them around in a positive light, then so be it. He is my strength. I love the life I have been given, and I hope I can make a difference in others' lives as well. I have been guided by God's love.

Asking to be used by God in a positive way can open the door for things to happen which were never planned. Living with diabetes can be like living with a little time bomb waiting to explode. As long as we look to the new opportunities this may bring, we will fare much better than those who take every little thing as an offense. Not all people with diabetes suffer complications, but many of us do. While some experience severe complications, others are fortunate and experience only mild ones. Even with complications, I know I have been guided by love.

In 1985, I found a new physician, an endocrinologist who specializes in diabetes. He made a tremendous improvement in my life. My new physician gave me education and knowl-

edge which I had never dreamed possible. In addition to enlightening me, he has been there through thick and thin, in pain and laughter, through good news and bad. My new knowledge and experiences have inspired me to fulfill my desire to help others. I have been guided by the love of a caring professional.

Being certified legally blind in 1989 meant a tremendous change in my lifestyle. New things had to be learned rapidly and accommodations had to be made quickly. My diabetic proliferative retinopathy continued progressing while I sought new information and learned new skills. Although the retinopathy progressed at a rapid rate, acuity in my left eye has stabilized at 20/100, and I have light perception in my right eye. My ophthalmologist, who specializes in retina disorders, supported and encouraged me throughout. I have been guided by the love expressed in his concern and optimism when I truly thought the worst.

Since 1988, I have been a member of a wonderful organization, the National Federation of the Blind and its Diabetics Division. The Diabetics Division is active in producing a publication called *Voice of the Diabetic*. I attribute much of my positive outlook on my blindness to the NFB and to the *Voice*. Many members of the Diabetics Division had experienced what was very new to me at that time. They shared both their good and bad experiences and gave me much-needed direction. I have been guided by the love of my fellow diabetics.

At Guide Dogs for the Blind, Inc., in San Rafael, California, an event occurred in 1989 that affected my life. A "blessed" event, it was the birth of a litter of five golden retriever puppies. The litter was known as the "W" litter, and pups were assigned really neat "W" names: Wallaby, Washoe, Wiffle, Wampum, and Willow. These pups were all targeted to become guides to those in need. At the time, I knew nothing of this occurrence. I was in God's hands and He knew what was happening. Again, God's love guided me.

Meanwhile, in 1990, I was given some very special information and education. I became involved in the Society for the Blind in Sacramento and took very intense classes in Braille. I was instructed by Josie, who is blind herself. With very firm, knowledgeable hands, she showed me how to read Braille well. Don and Gina, two other staff members, gave me detailed instruction in the use of the long, white cane. I am thankful for having been instructed in these skills. My orientation and mobility are second nature to me now.

While I continued preparing for the future in 1989, about 12 weeks after the litter with the special puppy was born, a young lady named Mica (pronounced Mee-ca) unknowingly became involved in my life even before we had met. Now we are great friends and can share our lives. Mica was actively involved in a 4-H program in Ra-

mona, California. Through this program, Willow, a pup from the "W" litter, was given to Mica and spent the next 16 months with Mica and her family. They gave their time – day and night – raising and training the fine, female golden retriever. Willow eagerly learned everything Mica taught her. Mica showed a dedication unsurpassed by others. She was committed to teaching Willow and to giving her the best chance in the world to become a guide dog. Willow had been guided by love.

In 1990, after learning traveling skills, I began to experience what I call an "unbonding" with my long, white cane. I never really identified with it. Oh, yes, it was there when I needed it and I admit I called it my "Pal" in the presence of others. However, the bond that was clearly needed was never really formed. I can use my long, white cane to travel, and it will assist me in getting anywhere I want to go. I still have those skills and am thankful for the knowledge I have in the use of my cane. However, it just wasn't "me". Gina, my orientation and mobility instructor, showed me what my life could be like with a guide dog. I was thrilled. After researching this idea at length and after discussions with my family, I applied for a guide dog from Guide Dogs for the Blind in San Rafael. Lo and behold! In a short period of time I was given an interview and was approved for a guide dog. The timing was just right.

In July of 1990, Mica and Willow had to say their good-byes to each other. Willow was sent to San Rafael to learn her guide dog trade. Mica continued her life without her little sidekick, even though she felt quite lonely for a long time. At Guide Dog School, Willow blossomed into a responsive, obedient guide dog. In three months she was ready to be matched to a blind person whom she would spend a lifetime guiding. My class had begun on November 11, 1990, and three days later, I discovered I was the one "chosen" for Willow. On December 8, 1990, Willow and I graduated from Guide Dog School together. Mica was reunited with Willow for a short period of time prior to the ceremony. During the ceremony, Mica and Willow said their last good-byes, and Mica turned Willow's leash over to me in a final act of intense love.

Willow and I have been working together ever since. I realize that we have only just begun. She has guided me through some very harried situations as well as the mundane. Mica is still part of our lives. I write and send photographs taken during my adventures with Willow. Willow and I are together day in and day out. She guides me very well and right on cue.

I have been guided by my mother's love. Mom was there in the early days when I was first diagnosed with Type I insulin-dependent diabetes. I have been guided by God's love. God has been a source of strength and courage to me for many years. That relationship continues to grow, and I

am very thankful. I have been guided by love demonstrated by my endocrinologist. He is there when I need him; he continuously shows me a tremendous amount of caring and sharing. I have been guided by love coming from my ophthalmologist, who is still quite hopeful. From him I continue to draw strength. He, too, shows a tremendous amount of caring and sharing. I have been guided by love of Josie, Don, and Gina who taught me Braille and independent travel. The skills I learned from them are very much a part of my everyday life. I have been guided by Mica's love. She did her part in getting my beautiful Willow prepared for her guide training. Mica succeeded in doing what was best. Willow is the direct result of Mica's love and commitment. I work daily with Willow. We are a team. I cannot begin to express the amount of sharing, bonding and communication that goes on between us and how very special this is to me. I was very ill in May 1991, and was in the hospital for three days. Of course, being an in-patient, I couldn't take my guide dog with me, but she could come to visit. All during that time, I thought I could hear Willow's chain rattle as she changed positions on the floor, and her signs of contentment. Our bonding goes deep, very deep. I am truly guided by love.

## Dear friends

The Diabetes Treatment Center of Houston, Texas asked its past and present patients to comment on measures that family members or friends can take to better support the person with diabetes. Only minor editing was made to the following responses.

If you have comments that would help others better understand diabetes, please send them to the *Voice* editor.

- Please have patience when my blood sugar lowers or rises above or below normal. I can get headaches, stomach aches, feel shaky – just totally feel bad. No one knows what it does to your body unless it happens to their own. Diabetics do eventually become normal again.

- The support of family members is one of the most effective elements in the successful treatment of diabetic patients. Understanding and being able to reason with the person is important, as well as preventing any problems which may cause depression, irritation, etc. With full support, nothing will prevent the diabetic person from leading a normal life.

- Become educated about diabetes: causes, symptoms, long- and short-term effects and treatments.

- I want my family to know just how diabetes affects a person. I want them to help with the meal planning and preparation, as well as being considerate when they can't do everything they want because of my diabetic condition. I want them to understand a change has to be made in one's life as a diabetic.

## Ringing in new resolutions

by Jamie Norris  
(Staff Reporter)

It's 1993 and the year is gleaming with potential. Everyone intending to use that superhuman willpower, like you, is making some New Year's resolutions. When dealing with raw resolutions, we need to look at them and tone them down to a workable level.

**Exercising at least a couple of hours every day:** Exercise is an important element in managing diabetes. For exercise to be healthy and beneficial, a reasonable routine you will enjoy and continue to follow is crucial. Don't set out as though you are training for the Olympics. Whether golfing, aerobicizing, or walking, remember to start slowly and gradually increase the level of difficulty and exercise time period.

Plan to exercise three to four times a week for 30 to 45 minutes each session. In doing so, you can have a resolution that will improve your diabetes condition and health.

It is important to realize you are not alone. Nearly 14 million Americans



have diabetes. Of these, approximately 80 percent are over age 50. For all people with diabetes, learning to manage their condition is the key element to a healthy life.

**Checking blood sugar several times a day:** Checking your blood glucose (sugar) several times a day is not necessary. Regulating your blood sugar gives you immediate feedback which allows you to examine your food and exercise choices for adjustments, if needed. A morning fasting test will allow you to plan for the day ahead and reflect on how well you managed the previous day.

**Taking medications as prescribed:** Taking your medications (insulin and oral) as prescribed is a reso-

If you or a friend would like to remember The Diabetes Division of the National Federation of the Blind in your will, you can do so by employing the following language:

"I give, devise, and bequeath unto The Diabetes Division of the National Federation of the Blind, 1800 Johnson Street, Baltimore, Maryland 21230, a District of Columbia nonprofit corporation, the sum of \$ \_\_\_\_\_" (or " \_\_\_\_\_ percent of my net estate" or "the following stocks and bonds: \_\_\_\_\_") to be used for its worthy purposes on behalf of blind persons."

lution that doesn't need fine tuning. Never change medications without first consulting your doctor.

**Losing fifty pounds:** About that diet — 50 pounds? Once again, let's tone down the resolution. Most people desire some form of weight loss, but a gradual well-planned weight loss is better than a crash diet. An average of two pounds a week is considered normal as a healthy loss.

**Follow that "diet" even if it means never eating that favorite dessert again:** A meal plan developed by a registered dietician will allow for weight reduction, blood sugar control, and balanced meals. Most recipes can be altered to adjust

amounts of sugar, fat, and salt and still be tasty. Health consciousness may take time and practice. If you're unsure, consult your dietician about classes offered on the subject.

You will benefit by eating and exercising right, but we are all human and occasionally slip. This is not the end of the world, you simply pick yourself up and continue on. Remember, if you do blunder, it should be in moderation and only occasionally.

The new year provides the perfect opportunity to turn over a new leaf and begin taking care of yourself properly. With your new or modified resolutions, welcome to 1993 — look forward to a great year!

## The bowl, the cup, and the glass

by Tom Stevens



Tom Stevens is an active member of the National Federation of the Blind.

*From the Editor: The mission of the National Federation of the Blind (NFB) is to serve blind people. This means, in part, engaging in fund-raising activities such as a walk-a-thon. Tom Stevens is an active Federationist who works diligently as an advocate for the blind by holding many positions such as Fund-raising Chairman for the NFB of Missouri, Columbia Chapter. He coordinated the 1992 walk-a-thon for the chapter in which numerous people participated.*

The day dawned bright and clear, a bit crisp. It offered a stiff breeze and the October leaves rustled, several falling as the breeze beckoned.

We arrived, got oriented and started setting up. The Coulter family arrived by taxi and a few minutes later, June and Ed arrived. Eight-year-old Larry Coulter sold me two much-needed candy bars, a school project in which he was engaged.

With everything under control, June and I took off into the trail's leafy undergrowth. Ed held down the table and lemonade and the Coulter's followed us later, as did Gary Wunder.

The first three miles of the trail has ten bridges and many trees. The quiet

of the timber met the sound of our voices, which soon faded away as we moved briskly along.

It took about an hour to reach the 3.3-mile marker and about 90 minutes to reach the 4.7-mile marker. A short rest seemed appropriate and June commented she could see a small store "up there." I believed "up there" was a shadowy promise which, however, became real after about a quarter of a mile.

The store manager spoke both little and fractured English. I inquired about a restroom, June pointed toward a door reading "employees only." I found it to be a storeroom of some sort, but at last the bathroom became apparent, its presence announced by its odor. As I went into the storeroom, the manager asked June if I needed a light! I let her answer that one.

After a 'sody' we started back, past the 4.7 marker where I had felt the inset inscription. My feet protested gently, but were put off.

The pace remained brisk and other walkers now became numerous, with several bikes mixed in. One couple passed us on their bikes, one with a small trailer behind it. Brightly painted, the trailer had two tiny children riding in it, they being probably not more than two years old. What a way to go!

As we passed the three-mile marker going back, we met another of our walkers, Bryan Michael. His goal included reaching the three-mile mark, so he joined us for his return trip.

Through the tunnel, around gentle curves, up small hills and down, over those bridges, our trail led back to the

start point. After a couple of deep drinks of lemonade, and a short rest, we decided to enjoy a repast at Hardie's, using coupons June had brought. Later that evening, we gathered for social conversation and another meal, to offset the weight loss from the walk-a-thon.

Late Monday morning, I put the last of 430 NFB letters I had stuffed over the weekend in the mailbox. I headed up the street toward a copy place to get a newsletter copied (*State and Style of the Writer's Division*) when I noted I had come to a restaurant. The manager had pledged \$20 to the walk-a-thon. "Why not," I thought.

I went in, taking charge of a booth. I ordered a bowl of chili, a cup of coffee, and a glass of water. As I waited, I thought a bit. It had been a good weekend. Collecting my pledges would bring in about \$300.

The walk-a-thon could have gone better, especially since some walkers noted that their pledges were down. The newsletter, now at the copy center, and the walk-a-thon were nearing fruition which argued well for my weekend of work and fun. Now, if those whom I had sent letters would enroll more Association members, it would be nothing less than superb.

The bowl, the cup, and the glass reached my table full. In a few minutes, they fulfilled their mission, being empty. The letters, the newsletter, and the walk-a-thon also were fulfilling a mission. Their potential is ongoing. With the help of others, it can be a great fulfillment ... And my feet are doing OK.

## Read the label for healthier eating

by Julie Fitzpatrick Rafferty

How can you know for sure if the words "no-cholesterol" on a frozen food entree mean that the product is low in fat, too? Here's some tips for deciphering food label jargon.

Terms like "low-sodium," or "low-fat," and "no-cholesterol" call to you from product packages on the grocer's shelf. Their allure is particularly strong if you have diabetes, heart disease, high blood pressure or certain other medical conditions. After all, prevailing wisdom still dictates that you cut back on the sodium and saturated fat in your diet.

But let's face it. Who has time to figure out if a "no-cholesterol" product is low in fat too. You want to shop in a hurry on the way home from work. You want to prepare dinner in under an hour, with a minimum of hassle. Some nights you just want to use those pre-processed, packaged foods that fill the supermarkets. Or, if you have time to cook something from scratch, you want it to taste really good, not just really healthy.

A new booklet from Joslin Diabetes Center, entitled *Eating Well, Living Better*, offers tips for converting existing recipes into healthier meals. It tells you how to decipher restaurant menus and offers tricks for better eating when dining out.

But perhaps most importantly, the booklet helps you determine what kinds of pre-packaged, pre-processed foods can be included in a low-fat, low-sodium, low-sugar diet. Along with Joslin's "Smart Shopper" course offered throughout the year at local Star Markets, the booklet helps people trying to eat healthier diets determine what's good for them, and what isn't.

"While one recent research study suggests that limiting fat and sodium may not be as beneficial as most previous research has suggested, most clinicians are still urging patients to cut back," says Joan Hill, R.D., C.D.E., director of Nutrition Services at Joslin in Boston and one of the authors of *Eating Well, Living Better*. "A high-fat diet leads to weight gain, and will certainly stall any efforts you make to lose weight. Also, diets that are high in animal fat will increase the levels of certain 'bad' fats in your bloodstream, and these bad fats, called low density lipoproteins (LDLs), can gradually clog your arteries, leading to heart and blood vessel disease." For people with diabetes, who are already more prone to heart attacks, strokes and blood vessel disease than the rest of the population, the need to cut back on fat is particularly strong.

"Scientists also have good reason to believe that too much sodium will contribute to high blood pressure," Hill adds. "People with diabetes have a higher risk of developing high blood pressure than the rest of the population, so again, they need to limit sodium intake, as does anyone with existing high blood pressure."

"Just because you're limiting the amount of fat and sodium in your diet doesn't mean that you can't use any of the pre-packaged foods that help make everyone's busy lives easier," says Hill. "You just need to understand what the label says, and choose wisely."

### Serving size crucial

Labels printed on most foods tell how much protein, carbohydrate, sodium, and fat is present in a single serving of that product. Before you can determine whether a box of graham

product is probably too high in sugar for you. "For cereals, look to see how many grams of sucrose are listed," says Hill. "If the cereal contains five grams or less, it's okay."

You should eat no more than 3,000 milligrams of sodium per day. Canned, packaged and convenience foods can be particularly high in sodium. When salt or sodium is listed among the first four or five ingredients on the label, the food is probably high in sodium. If a label claims a food contains less salt, the Food and Drug Administration requires the manufacturer

soups should be avoided if you are on a sodium-restricted diet."

### Lowering fat

It's best to choose products made from polyunsaturated fats, that is fats from non-animal products such as vegetable oils. These fats increase the amount of good fats circulating in your blood without increasing the amounts of bad fats. Avoid products that list saturated fats such as beef fat, lard, butter fat, coconut, palm or palm kernel oil. Instead choose items that list corn, safflower or sunflower oil. Use caution if the product label lists "partially hydrogenated oils" on its labeling, because these oils may have been unsaturated at the outset but have been made more saturated in processing. No more than 30 percent of total calories in your diet should come from fat, with about 20 percent of your diet from protein and 50-60 percent from carbohydrates. Choose those products that most closely mimic this ratio of fat to protein and carbohydrate. If you eat a high fat food, you will have to compensate by eating other foods that are extremely low in fat.

### Lowering cholesterol

Cholesterol is a fat-like substance that winds up in your bloodstream both because your liver and intestines manufacture it, and because you eat foods that contain it. If too much builds up it can become deposited on the walls of your arteries, leading to cardiovascular disease. Hill recommends that you limit the amount of cholesterol you eat to no more than 300 milligrams per day. The amount of cholesterol contained in most products is listed on the product labels. Keep the amount of calories you consume as fat down below 30 percent of your total calorie intake, and limit the cholesterol containing foods you eat.

### Terms can be deceiving

So what about those "no-cholesterol," "low-sodium" claims on the package? "Those phrases have specific meanings, regulated by the federal Food and Drug Administration," says Hill. And happily, in 1993 the FDA is requiring manufacturers to streamline package labels to make them easier for health-conscious consumers to understand, although there is some discussion about modifying when and how these regulations will be implemented.

"But the best rule of thumb is to be a little skeptical," says Hill. "'Low cholesterol' sounds good, but it doesn't necessarily mean low-fat. Follow the label reading directions we've offered here and you'll be on the road to healthier eating," she says.

(Note: This article appeared in the 1992 issue of *Joslin*. Reprinted courtesy of the Joslin Diabetes Center.)



cracker cookies or a frozen macaroni and cheese entree is okay for you to fit into your meal plan, you first need to determine what the product's manufacturers are calling a single serving.

"The serving size may not be the same as what you consider a normal portion," notes Hill. "If you usually eat more than what is called one serving, you have to account for the increase. If you use the product, adhere to the portion size on the food lists given by your dietitian."

### Look at the ingredients

"The ingredient present in the largest amount by weight in a product is listed first on the label, and the one present in the smallest amount is listed last," says Hill.

When reading the label keep in mind the concepts your dietitian and physician have already explained to you about the amount of fat, cholesterol, fiber and sodium you should have in your diet.

### Lowering sugar

If you are looking to lower the amount of simple sugar in your diet because you have diabetes, a good rule of thumb to observe is that if sucrose or any other simple sugars (such as fructose, corn or rice syrup, dextrose, honey, maltose, molasses, maple sugar) are listed among the product's first three ingredients, the

to state the amount of sodium per serving on the label.

To determine whether a product is high in sodium, keep in mind that you need to consider what the product manufacturer is calling a serving size, and what you consider a serving size. For example, look at the nutrition label from this can of chicken noodle soup (below).

### Nutritional Information Per Serving of Soup

Size	4 oz. — condensed 8 oz. as prepared
Calories	110
Servings per container	2-3/4
Total carbohydrates (grams)	9
Fats (grams)	8
Sodium	960/mg serving

From this, you can see that one serving (eight ounces, or one cup prepared) contains 960 milligrams of sodium. "But let's face it," says Hill. "Most people do not eat just eight ounces of soup." To determine the amount of sodium in the entire can, multiply the number of servings by the milligram of sodium per serving:

$$2.75 \text{ servings} \times 960 \text{ mg sodium/serving} = 2,640 \text{ mg sodium per can.}$$

"So, even if you were to only eat half of the can of soup you would be eating 1,320 mg of sodium," she says. "You can see why regular canned



## Recipe Corner

Ann Terry is a registered dietitian who works at the State Hospital in Fulton, Missouri and at the Veterans Administration Hospital of Columbia, Missouri. She graciously calculates the diabetic exchanges and food values for our recipes.

Send your great ideas to the editor. He is the official taste tester and needs recipes to test his taster.

### Black Bean Soup

Appeared in *Cooking with Catfish Hunter*, courtesy of the Upjohn Company.

1 cup dried black beans  
1 quart chicken broth  
1 quart water  
Freshly ground black pepper to taste  
2 bay leaves  
2 tbsp. safflower oil  
1 large onion, chopped  
2 celery stalks, with leaves, sliced  
2 garlic cloves, chopped  
1 small red bell pepper, stemmed, seeded and coarsely chopped  
1 small green bell pepper, stemmed, seeded and coarsely chopped  
1 small yellow bell pepper, stemmed, seeded and coarsely chopped (or use 2 red bell peppers)  
1/2 tsp. red pepper flakes (optional)

1/2 tsp. dried basil  
1-1/2 tbsp. balsamic or red wine vinegar  
1/2 cup plain low-fat yogurt  
2 to 3 tbsp. chopped fresh parsley or coriander

Soak beans overnight in enough water to cover. Drain beans and place in soup kettle. Add broth, water, black pepper and bay leaves, place over high heat and bring to a boil. Lower heat, partially cover and cook at a simmer for 2-1/2 to 3 hours, or until beans are tender. Thirty minutes before beans are done, heat oil in large skillet over medium heat. Add onion, celery and garlic and cook, stirring occasionally for 2 to 3 minutes, or until vegetables have softened slightly. Stir in red, green and yellow bell peppers and cook for 2 to 3 minutes. Add sauteed vegetables, red pepper flakes, basil and vinegar to beans and stir well. Cook until beans are soft but vegetables still have some crunch. Ladle into soup bowls, place a dollop of yogurt in center of each bowl and sprinkle with chopped parsley or coriander.

Yield: 4 servings; Calories: 250; Diabetic Exchanges: 2 bread, 2 vegetables, and 1/2 meat.

### Chicken Cordon-Bleu

Martha Young of Braymer, Missouri, is the energetic president of the North Central Chapter of the NFB of Missouri. She was a Weight Watchers lecturer for 11 years, and has revamped the following recipe for diabetic diets.

2 oz. boned, skinned, cooked chicken breast  
1 oz. cheddar cheese  
1 slice enriched bread toasted made into crumbs  
1/4 tsp. paprika  
salt & pepper to taste

Slice chicken breast lengthwise to make a pocket. Stuff with the cheese. Combine crumbs, paprika, salt & pepper. Moisten chicken, dip in crumb mixture and use any left over crumb mixture to spread over it. Bake 20 minutes at 350 degrees.

Yield: 1 serving; Calories: 310; Diabetic Exchanges: 3 meat, 1 bread.

### Diabetic Oatmeal Cookies

from Linda Carstens of Virginia, Minnesota

1/2 cup lowfat oleo  
1 egg beaten  
1 tsp. vanilla  
1 cup flour  
1/2 tsp. baking soda  
1 tsp. cinnamon  
1-1/4 cup oatmeal  
1/2 cup concentrated apple juice

Add raisins or nuts as desired. Cream oleo, eggs, vanilla and beat. Blend in flour, soda and cinnamon. Stir in oatmeal and whatever else. Drop onto ungreased cookie sheet and bake at 375 degrees for 10 minutes. Freeze or refrigerate.

Yield: 3 dozen cookies (three cookies per serving); Calories: 125; Diabetic Exchanges: 1 bread, 1 fat.

## Conference announcement

pared by experts in the field, and share experiences in order to arrive at a consensus to answer the following six questions:

1. What clinical measurements and functional behaviors define the population of adults who can benefit from low-vision devices (any optical or non-optical device or environmental modification that enhances visual performance)?

2. What are the best standard clinical and functional assessment practices in vision rehabilitation addressing the needs of adults with low vision? What assessment and referral services do primary health care specialists (MD, OD, DO) provide for adults with low vision?

3. What are the optical-functional characteristics of available low-vision devices that meet the needs of adults with low vision?

4. What are the best practices for determining which low-vision devices will be most effective in maximizing visual function for adults with low vision? (Factors for consideration should include cosmetically acceptable and other psychosocial issues, cost effectiveness, accessibility, user-friendliness, maintenance/repair/durability issues.)

5. What instruction and guided practice currently best insures successful utilization of devices?

6. What future research is needed?

Public participation is encouraged at the forum on January 25, and ample opportunity will be provided for open discussion. Individuals and organizations are invited to testify on topics related to the consensus questions. Speakers should limit their testimony to scientific or experiential data that identifies the state-of-the-art or best practices to protocols for choosing low vision devices.

People unable to travel to the conference to provide oral testimony may submit written, audio-taped, or videotaped testimony in advance. Submissions must be received by January 4, 1993. The first 10 minutes will be read/entered into the record for consideration by the Consensus Validation Panel members in their deliberations leading to a Consensus Statement. The Consensus Statement, arrived by the final day of the meeting, will be announced at a press availability at 11:00 a.m. on January 27, 1993.

The steps leading to consensus include a meeting of an independent panel of experts who pose the questions for consensus; the panel meeting which includes public testimony, deliberations, and notification of the

Consensus Statement to the media; and the dissemination of the Consensus Statement.

The Consensus Statement will serve as a major resource and reference tool for consumers, researchers, rehabilitation professionals, health care providers, and policy makers.

## Board Members

*The Diabetes Division of the National Federation of the Blind.*

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## Blood glucose monitoring systems with audio output

by Ed Bryant

Due to my continuing communications with blind diabetics and those losing vision as well as health and rehabilitation professionals, I am often asked about various glucometers with voice enunciation. As editor of *Voice of the Diabetic*, I felt that a straightforward evaluation, giving both the strengths and weaknesses of each system, would best serve the cause of our support and information network. After all, The Diabetics Division of the National Federation of the Blind exists to serve diabetics, especially blind diabetics. While reading this article, keep in mind that there is no one glucose monitoring system that is ideal for everyone. Some systems with audio output provide instructional cassettes which explain how to use the unit. After reviewing the instructional tape, the blind diabetic should practice operating the new talking glucometer. Once the diabetic is familiar with the monitoring system and how to use it, he/she should have no trouble obtaining accurate glucose readings. If the diabetic, blind or sighted, has difficulty in using the new system, he/she should not hesitate to ask for assistance from health care professionals or a friend.

In this article I list five sources for packaged systems and components of glucometers with audio output. Those from the first three sources are readily available. Systems listed under the two remaining sources are either not yet on the market or are currently in use but no longer available.

### Blood Glucose Monitoring Systems — Currently Available

#### 1.) Digi-Voice Plus II: Science Products, Box 888, Southeastern, PA 19399; telephone: 1-800-888-7400.

Lifescan One Touch II Meter with Digi-Voice Module is offered by Science Products under the name of Digi-Voice Plus II. This system has two small box-like units. The One Touch II Meter and Digi-Voice are attached by a short patch cord. I found this glucometer fairly easy to use. However, sometimes I had trouble getting a large enough drop of blood on the correct spot of the test strip pad. Blood is placed on the pad while in the meter, but if the user bleeds very much, excess blood may flow onto part of the instrument. The entire glucose test takes 45 seconds.

The other part of this system is the Digi-Voice Module which provides audio output to the meter. The Digi-Voice is easy to use. In addition to a volume control knob, a toggle switch turns the unit on and repeats glucose readings.

The system comes with an AC adapter, a rechargeable 9-volt Ni-Cad battery, and an earphone for private listening. It does not come with a tote bag. The Digi-Voice Module can be purchased separately from Science

#### Products.

An audio cassette explaining how to use the Digi-Voice and One Touch II meter is included with all orders and provides good directions for using the system. The only deficiency with this tape is that it does not explain how to insert the test strip into the meter. Science Products sells the Digi-Voice Plus II for \$395 plus \$9.95 shipping and handling. The system carries a one-year warranty. Purchased separately, the Digi-Voice Module costs \$275 plus shipping and handling. An extended warranty to three years is available for the Digi-Voice for \$20.

**Special offer:** Science Products makes a special offer to *Voice* readers. Consumers interested in purchasing the entire Digi-Voice Plus II system must mention the *Voice of the Diabetic* in order to receive the special price of \$375 plus shipping and handling. When ordering, specify #1525 Digi-Voice Plus II.

#### 2.) Touch-N-Talk II: American Foundation for the Blind, 100 Enterprise Place, P.O. Box 7044, Dover, DE 19903; telephone: 1-800-829-0500.

Lifescan One Touch II Meter and Touch-N-Talk II Voice Synthesizer is offered by the AFB under the name Touch-N-Talk II. This system has two small box-like units. The One Touch II Meter and the Touch-N-Talk II Voice Synthesizer are attached by a short patch cord. As stated in the previous evaluation, I found the One Touch II Meter fairly easy to use but I sometimes had trouble getting a large enough drop of blood on the correct spot of the test strip pad. Blood is placed on the test strip pad while in the meter, but if the user bleeds very much, excess blood may flow onto part of the instrument. The entire glucose test takes 45 seconds.

The Touch-N-Talk speech is not as clear as that of the Digi-Voice Module sold by Science Products. The unit uses one 9-volt alkaline battery which is not rechargeable and is not included. An AC adapter is also not included but is available at an additional cost of \$11.95. No tote bag is offered with this system.

An audio cassette explaining how to use the Touch-N-Talk is included with all orders. A separate cassette is provided which explains how to use the One Touch II Meter. This tape was prepared by Lifescan for the sighted public and is of little value to a blind person. It refers the user to pictures and pages in printed material. The tape does not indicate location of buttons, give instructions for placing blood on the test strip pad, nor tell where to insert the strip. To repeat, the tape instructions accompanying the One Touch II Meter are not suitable for use by blind persons.

Regarding cassette instructions for the Touch-N-Talk and other informa-

tion, I telephoned the AFB on September 1, 1992 to inquire about the One Touch II Meter with Touch-N-Talk. The person who answered said she didn't know anything about these items but would look them up in her book. She could only read what was provided her and could not answer specific questions. I inquired about a warranty and after awhile was given the Lifescan telephone number. I told the lady I was sure Lifescan carried a warranty on the meter but they had nothing to do with the voice box. She said her information indicated that Lifescan carried the warranty. I then telephoned Lifescan and found they carried a one-year warranty on the One Touch II Meter but had nothing to do with the Touch-N-Talk. I again called the AFB and reached a different person who still could not answer my questions. This individual, like the first, said that she could do was read what was given her to explain the product. In another subsequent call I talked to a new person. This individual said she, like the others, could only read what was provided to workers to explain the products. I was pleased when she told me she would contact the customer service department and would definitely have information sent which explained the Touch-N-Talk. Today is December 1, 1992 and I have not received the information as promised by the AFB.

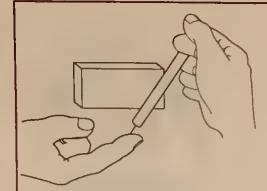
All other vendors (Home Diagnostics, Inc., Boehringer Mannheim Corp., and Science Products) selling glucose monitoring systems with audio output have well-trained personnel to receive incoming calls. The American Foundation for the Blind staff members with whom I conversed were not trained and even admitted they knew nothing about the Touch-N-Talk except what was given them to read.

The AFB sells the Touch-N-Talk II system for \$399.90 plus \$11.50 shipping and handling. The audio output unit, the Touch-N-Talk II Voice Synthesizer, costs \$249.95 plus shipping and handling (9-volt battery not included).

#### 3.) Accu-Check II Freedom System: Boehringer Mannheim Corp., 9115 Hague Road, Indianapolis, IN 46250; telephone: 1-800-428-5074.

This system is housed in one unit. The monitor has a finger guide to assist the user in getting a drop of blood onto the center of the test strip pad. Once a drop of blood is on the pad and a light reads it, the machine says "Press the Timer Button." Some blind diabetics like this feature, but some have trouble getting enough blood on the pad. The finger guide may be good for those with shaky hands.

Boehringer Mannheim makes different types of reagent strips so the consumer needs to make certain he/she purchases the correct type.



The weight and size of this unit prevents most diabetics from testing blood glucose levels outside their residences. With dimensions of approximately 12" x 12" x 7" and a weight of 11-1/2 pounds, the Freedom System is large and awkward.

An easy-to-understand cassette explaining how to use the system is included with all orders. The Freedom System has a two-year warranty. Suggested retail price is \$600-\$700.

### Blood Glucose Monitoring Systems — Currently Not Available

#### 4.) Diascan SVM and Diascan Partner: Home Diagnostics, Inc., 51 James Way, Eatontown, NJ 07724; telephone: 1-800-342-7226.

The Diascan SVM Meter and Voice Box system was previously offered by Home Diagnostics, Inc. Although this system is no longer being manufactured, nor being offered for sale, it is extremely easy to use and came with an easy-to-understand instructional cassette. This is the system that I currently use. Its greatest asset is that there is no need to put a drop of blood on the test strip pad. Blood smeared on the pad will still produce an acceptable clinical reading.

Some people have reported difficulty in finding Diascan test strips. I have spoken to Linda Hartheimer, Marketing Manager for Home Diagnostics, Inc., who informed me that anyone having difficulty in obtaining test strips should contact Home Diagnostics, Inc. because an adequate supply is available.

The Diascan Partner was designed to replace the Diascan SVM. The Partner uses the same strips as the Diascan SVM but Home Diagnostics, Inc. states it will not be available until spring 1993. I have examined a prototype of the new unit; it is the best of any I have seen. Like the Diascan SVM, the Partner produces an acceptable clinical reading from a smear of blood on the test strip pad. All other monitors require a drop of blood on the pad to obtain a reliable reading. The entire glucose test takes 90 seconds. This system is powered by two AA batteries and comes with an earphone for private listening. It has a volume knob and a repeat button to review glucose readings. With a weight of approximately eight ounces, the Diascan Partner can easily be held in one hand. Of all glucometers with audio output, the Partner is the smallest. An over-the-shoulder tote bag with adjustable straps will be in-

(Continued on page 17)



## J.O.B. employer's bulletin / 1992

(Editor's Note: The following open letter to employers is sponsored by JOB and NFB as listed below.)

Lorraine Rovig is director of Job Opportunities for the Blind, a national job referral program designed to assist blind persons in finding employment.

**JOB OPPORTUNITIES FOR  
THE BLIND — (JOB)**  
Lorraine Rovig, Director  
800-638-7518 (In Wats)

**NATIONAL FEDERATION OF THE BLIND**  
MARC MAURER, President  
1800 JOHNSON STREET  
BALTIMORE, MARYLAND 21230  
410-659-9314

Dear Employer:

As of July 26, 1992, the Americans with Disabilities Act (ADA) requires, among other things, that companies ("covered entities") with 25 or more employees prevent discrimination against "a qualified individual with a disability" who is "otherwise qualified" by actively providing one or more kinds of "reasonable accommodation" unless "the accommodation would impose an undue hardship" on the company.

From the point of view of most employers, the important points are covered in two basic questions: "What constitutes reasonable accommodation? How can I be fair to my company and to the otherwise qualified individual?"

Our program can help. Job Opportunities for the Blind (JOB) is a joint project of the U.S. Department of Labor and the National Federation of the Blind (NFB). We offer free consultation to persons who are legally blind and to employers on any question concerning employment and blindness. In many instances we can answer questions over the phone; other times we can put your company in touch with JOB volunteers in your community who can assist with local solutions.

In addition to our work-oriented program we have access to the services of a sister program, the Information Access Project for Blind Individuals (IAP) (a joint project of the National Federation of the Blind and the U.S. Department of Justice), which offers to covered entities free consultation in meeting the ADA's information access requirements. (Write to the IAP at the NFB headquarter's address above, or call: (410) 659-9314.)

Founded in 1940 and presently having some 50,000 members, the National Federation of the Blind is the oldest and largest consumer group of blind Americans in the country. In our 50 years we have built a national reputation for solving problems and for championing fair play for blind Americans when questions of legislation or law arise. Here are our thoughts on what constitutes "reasonable accommodation" and "undue hardship" in two specific instances.

Consider a totally blind woman who is employed as a reporter on a city newspaper. She has built a solid record of achievement equal to her co-workers while working at a job which is print intensive, people intensive, and travel intensive. Many employers would automatically assume

a blind person could not do what she has been doing for over 10 years. Please note that she is a real person. We will call her "Miss Example" to provide some privacy; however, she has offered to speak directly to any employer who has further questions. (Call JOB should you wish an introduction.)

Remember, too, that we have purposely chosen someone who uses many techniques, including a variety of technological aids for increased flexibility in an intensive job, but that other persons who are legally blind doing the same job would likely have some differences in the tools and techniques used.

### The Blind Reporter

Miss Example works in the features department and is out of the office approximately 40 percent of the time. When researching her regular travel features, she travels to the site with the photographer assigned to the story, or with a driver she has hired and trained to describe passing scenery. (She uses the mileage allowance given to all reporters by the employer to pay her driver.)

To compose her articles while in the car or at the site, she uses a Braille 'n Speak. (It works like a laptop computer but has Braille input keys/voice output. 1992/about \$1,000/some variations available.) For some notes, she uses 3 x 5 cards with a Postcard State and stylus. (Looking like two thick plastic postcards hinged together and a stubby pencil, these pocket tools are used to write Braille. 1992/\$2.50.) Either device is handy for saving direct quotes in interviews or she may use a small cassette recorder and cassette tapes (standard office equipment) as her sighted co-workers do.

In the office, attaching the Braille laptop to a printer (standard office equipment), she can turn out a print document. More often in the office, she'll use an IBM PC clone which is linked to the office system and accessed by her speech synthesizer and software. (Provides voice output. 1992/about \$800-\$900/many variations possible.)

Until recent years, for background research and for scouting material for story ideas, such as calendars of upcoming events, she used readers only. (Persons hired to read print aloud at the direction of a blind person. Some were volunteers and some were paid. Miss Example found and trained all her readers.)

Occasionally, a short piece of reading material (such as print phone messages left on her desk) will be read as a favor by co-workers. This informal part of the system works well since Miss Example is very cooperative in offering help to her sighted co-workers when they need it. It is no more significant than it would be for a short worker to occasionally ask a taller co-worker to reach and pull files overhead; or to ask a co-worker who understands the whims of WordPerfect how to change fonts.

In recent years, Miss Example has used a modem on her voice-equipped office computer to access news from local, state, national, and international wire services. (She bought it. 1992/with software about \$100.)

She estimates she currently saves about ninety percent of the time and money she previously budgeted for readers by using an Arkenstone Reader. (Scans print/reads it aloud. 1992/New reading machines range from \$4,000-\$12,000. She found a good, used model for \$2,200.)

### Who Bought the Tools Before the ADA?

Miss Example decided she wanted to buy her own tools. Machines she used when she first began the job (and had very little money) were bought at her request by her state vocational rehabilitation agency to assist her in becoming "job ready." Later, she wanted to upgrade her equipment, so she bought her own.

Times have changed. Miss Example has proven her worth to her employer. The company is glad to have her and they don't want to lose her. In six weeks, her paper is installing a new office network of "386" computers. Along with a duplicate of the PCs being purchased for all the reporters, the employer will purchase a compatible voice output device for Miss Example. Her employer asked for and accepted her advice on which output device will help her most. (Many variations possible/1992 hardware from \$280-\$1,200; software from \$75-\$500.)

### After the ADA is Implemented

Once the ADA takes effect, Miss Example might reasonably ask her employer to reimburse some or all of her expenses for reader service. If repairs become necessary for any of her machines, including the Arkenstone, we believe the employer might reasonably be expected to cover such repairs as it would cover repairs to other necessary office machines for any experienced reporter.

On the other hand, if Miss Example were just out of college with her journalism degree and her early experience on the university paper, she might reasonably ask her new employer to reimburse some or all of her

reader service, plus cover the cost of the speech synthesizer with software that provides her with access to the office computer system. These tools are basic to her having a chance to compete equally with her sighted co-workers. Perhaps, she might reasonably request the **modem** (which would save the employer much of the expense for reader time.)

The employer might reasonably request that the employee ask the state vocational rehabilitation agency to purchase some or all of these accommodations for the new employee.

#### Complications

Some state vocational agencies will fund some employment accommodations. However, many state agencies have administrative requirements that prevent them from purchasing equipment for state residents who are already employed, and unfortunately, many state agencies are so bureaucratic — and slow — that many competent blind adults who are not yet employed cannot wade through the state agency requirements in time to be eligible for a job opening before it is filled. Such individuals pray that the provisions of the ADA will slice through such obstructions.

Since Miss Example (through her journalism degree) would have proven her ability to "perform the essential functions" of the job [Title I, Sec. 101: DEFINITIONS (8)], the employer would be under obligation to provide some accommodations (Title I, Sec. 102: DISCRIMINATION). By the provisions of the ADA, we believe employers may not rely solely on the existence of state bureaucracies to help legally blind citizens acquire reasonable accommodations. Employers are permitted to consider the cost of accommodations [Title I, Sec. 101, (10): UNDUE HARSHSHIP].

#### The Switchboard Operator with a Visual Impairment

Our second example is again a real person who offers to talk with employers who have further questions. "Ms. Sample" has worked for many years on a large hospital switchboard, covering shifts at all different times of the day and night. Although she is legally blind, she has enough sight to enable her to use print most of the time by bringing print material very close to her face. She supplements this with voice output devices and alternative techniques for blind persons.

*When taking a message for a sighted staff member, she types the message on a sheet of paper from a standard pre-lined message pad. Occasionally, she will print the message, using a black felt tip pen (all standard company equipment) so that she can more easily see it.*

When her supervisor gives written memos to the switchboard operators, or when directives are posted on the staff bulletin board, Ms. Sample has permission to ask her co-workers to read them to her when they are not busy. She tapes the material on a **small cassette recorder**. (*She bought it. 1992/about \$20 plus about \$2 for three tapes. Much variation possible.*)

Occasionally, Ms. Sample will take print copies of memos home, especially if long or complicated, and have **readers** she has found and trained tape the material for her. (*Volunteers or she pays them by the hour.*) She has served on several employer-employee committees and uses her readers to access their paperwork, too.

Some blind operators use a **light probe** for a multiline switchboard, but Ms. Sample does not. (*Shaped like a short fat pencil, it beeps when pointed at the lightbulb for the ringing call. 1992/about \$100, plus \$2.50 for an ear-loop/Uses regular batteries or electricity/Repairs by an electrician are occasionally needed. This purchase would be a reasonable accommodation if needed by a legally blind operator.*)

#### In Conclusion

How much equipment? Which model? Repairs? How much reader service? What changes in procedure are reasonable? These are samples of the worrisome gray area of the ADA. We can help. For those employers who want cost comparisons and suggestions for "reasonable accommodations," we offer our 50 years of expertise in accommodations for persons who are legally blind along with our knowledge of adaptive technology currently available.

- Our interest is in helping individuals with the disability of blindness find and keep full-time jobs in a competent, competitive manner.
- We can help you find solutions as you build a record of fair treatment of job applicants/employees who are legally blind.
- We believe that cooperation will do much to increase the job chances of blind Americans and will assist business in the process.

JOB OPPORTUNITIES FOR THE BLIND / 800-638-7518

## Anti-rejection protein could release transplant patients from life of drugs

(A.P. — Washington) Tests show that a new protein can trick the mouse immune system into accepting, instead of attacking, transplanted tissue. Experts say the discovery may lead to organ transplants without a lifetime on anti-rejection drugs.

Jeffrey Bluestone, leader of a research team at the University of Chicago Medical Center, said the protein blocks a key signal that immune cells in the blood, called T-cells, must receive before they attack transplanted tissue. Without the signal, an organ transplant is tolerated by the body, he said.

While the new protein can ease the body's acceptance of transplanted tissue, the rest of the immune system is left intact and able to fight off germs and diseases.

A report on the study is to be published today in the journal *Science*.

In the Chicago study, a group of diabetic mice received transplants of human pancreatic tissue. Half of the mice also were treated with injections over a 14-day period of a genetically engineered protein called CTLA4lg.

The mice that did not receive the protein shots rejected the tissue transplanted and the grafts died within a week. Grafts in the mice that did receive the CTLA4lg shots survived and, in most cases, showed no sign of

being rejected by the immune system. Bluestone reported that the grafts also produced insulin, thus correcting the diabetes.

A number of test runs were conducted with several groups of laboratory mice and the results were generally the same, he said.

"We kept some mice with grafts for well over 100 days," said Bluestone. "That means that the graft is tolerant [accepted by the body]."

Dr. J. Richard Thistlethwaite, chief of transplantation services at the University of Chicago Medical Center and a co-author with Bluestone, said if the technique can be perfected for human use, "we will have solved the major problem facing organ transplantation today."

Patients receiving kidney, heart or liver transplants must take a lifetime of drugs to prevent rejection of the transplanted organ. These drugs suppress all immune functions. As a result, transplant patients are in danger of catching other diseases.

The CTLA4lg protein affects only a few T-cells, leaving the rest of the immune system healthy and able to fight infection.

(Note: This article appeared August 7, 1992, in the *St. Paul Pioneer Press*, St. Paul, Minnesota.)

## Blood glucose monitoring systems

(Continued from page 15)

cluded when the Partner becomes available. I am told by Home Diagnostics that an easy-to-understand audio cassette with clear operating instructions explaining the system will be included. When the Diascan Partner becomes available, the suggested retail price will be \$399 plus shipping and handling.

5.) Beta-Scan and Vision bG: British American Medical Inc., 26941 Cabot Road, Suite 115, Laguna Hills, CA 92653; telephone: 1-800-866-1187.

The Beta-Scan meter is no longer available. I am told that TREND strips, the reagent strips needed with the Beta-Scan meter, are available through British American Medical Inc. However, I have received reports from consumers that they have had much difficulty in obtaining TREND strips.

Hypoguard Limited of Woodbridge, Suffolk, England owns the Vision bG system. Pending FDA approval, the unit will be distributed in the United States by British American Medical Inc.

I mention the Vision bG system to give **Voice** readers an idea about a new development in a product that is not yet on the market. The reagent pad is housed in the bottom of a small, round, plastic disk called a cell. After the finger is punctured, blood is directed down a funnel located inside the cell to the reagent pad. When enough blood reaches the pad, the meter informs the user the test has

begun. The user then pushes a button which starts the timer. A reading is given automatically in approximately one minute. The cell must be replaced after each test. Although this method will cost more, the cell does have advantages. For one thing, the cell's posts can be felt tactually and insure correct placement of the puncture site. In addition, the tactile guide posts on the cell insures placement of blood on the reagent pad. The cell is inserted in the machine before testing which eliminates the need for placement into the glucometer during the test.

According to Tom Buckley, president of British American Medical Inc., FDA approval may come in spring 1993. The probable suggested retail price will be \$500-\$600. There are no plans to include an earphone, AC adapter, or tote bag. Most likely, it will use two AA batteries or a 9-volt cell. Buckley indicated that a cassette instruction tape will not be initially included but may be available later. Approximate dimensions will be 7-1/2" wide x 5" deep x 2" high.

Readers who might be interested in this system, please watch for articles in future **Voice** issues. Buckley has assured me that I will receive the Vision bG to evaluate.

In summary, of the blood glucose monitoring systems with audio output, my current first choice is the Digi-Voice Plus II System from Science Products. Of systems currently avail-

(Continued on page 18)

## What you always wanted to know but didn't know where to ask

(Resource list)

(Inclusion of materials in this publication is for information only and does not imply endorsement by the Diabetes Division of the NFB.)

### Equipment

**Digi-Voice Plus II:** This system is the Digi-Voice Speech Module and Lifescan One Touch II Glucometer. The Digi-Voice is easy to understand and speaks the same words that are displayed on the meter. An instructional cassette is provided with all orders.

Science Products sells the Digi-Voice Plus II for \$395 plus \$9.95 shipping and handling. This system carries a one-year warranty. Purchased separately, the Digi-Voice Module costs \$275 plus shipping and handling. An extended warranty for three years is available for the Digi-Voice alone for \$20.

**SPECIAL OFFER:** Science Products makes a special offer to *Voice* readers. If customers, interested in purchasing the system, say they heard about the special offer in the *Voice of the Diabetic*, they will receive a special price of \$375 plus \$9.95 shipping and handling. When ordering, specify #1525 Digi-Voice Plus II. For orders and information contact: Science Products, Box 888, Southeastern, PA 19399; telephone: 1-800-888-7400.

**Glucometers with voice enunciation:** In this issue of the *Voice* there is an evaluation of blood glucose monitoring systems with special capability. Please refer to the article "Blood glucose monitoring systems with audio output."

### Nutrition Hot Line

The National Center For Nutrition and Dietetics provides an information hot line on nutrition staffed by registered dietitians. For information about balancing your diet call toll-free: 1-800-366-1655 between 9:00 a.m. and 4:00 p.m. (Central time) to talk to a registered dietitian, or call anytime for recorded messages concerning current issues in dietetics.

## Blood glucose monitoring systems

(Continued from page 17)

able, my second choice is the Accu-Check II Freedom System. However, my first choice will be the Diascan Partner System when it becomes available. For the reasons previously stated, I DO NOT recommend the Touch-N-Talk II System from the American Foundation for the Blind. Of course, I look forward to evaluating the Vision bG unit at some point in the future.

### Braille/Tape Exchange List

**Exchange list for meal planning:** This list is now available in Braille (83 Braille-written pages bound in a nice, durable, plastic cover) and on cassette.

This revision, the first in 10 years, is the result of a joint effort of the American Diabetes Association and the American Dietetic Association and reflects today's food values and eating patterns. It continues to restrict fat but emphasizes high carbohydrate and fiber foods. Nutritive values have been increased in such foods as fruits, milk products and carbohydrate/starch exchanges. New additions include a list of free foods, exchange values of combination foods, and a list of foods for occasional use. There is also a glossary of nutritional terms and an index of foods.

Make tax deductible checks payable to: National Federation of the Blind. Cost: Braille \$10.00, and cassette \$2.00. Order from: National Federation of the Blind, Materials Center, 1800 Johnson Street, Baltimore, MD 21230; telephone: (410) 659-9314.

### Literature

**Diabetes Beating the Odds:** The Doctor's Guide to Reducing Your Risk, by Elliot J. Rayfield, M.D. and Cheryl Solimini. This new 150-page book has a lot of good information for both type I and type II diabetics. It is written in easy-to-understand language instead of the usual jargon found in most medical journals.

This book received excellent reviews by physicians from Johns Hopkins Diabetes Center, Harvard Medical School/Massachusetts General Hospital, and Washington University Medical School.

Readers may be interested in the table of contents which includes: The Genetic Connection, Are You Adding to Your Risk?, The Importance of Early Detection, Beating the Odds Through Diet, The Exercise Edge, Defensive De-stressing, and What the Future Holds.

*Diabetes Beating the Odds* costs \$7.95 in the United States and \$9.95 in Canada. Order from bookstores or the publisher: Addison-Wesley Publishing Company, One Jacob Way, Reading, Massachusetts 01867-3999.

I have reported on talking glucose systems sold in the United States. Their strengths and weaknesses have been provided, plus reports on the service I received as a potential customer from the different companies. This is important because as consumers we deserve and should expect to be treated in a professional manner. Please feel free to contact me with questions or comments.



## Food for thought

We invite blurbs and tidbit articles for inclusion in this column. Materials received may be edited and used as space permits.

### Trying to Do the Job Alone by A Bricklayer

*From the Editor: This article appeared in the Fall 1989 issue of the Voice. If you are a bricklayer, stay on your toes.*

I am writing in response to your request for additional information. In block number three of the accident reporting form, I put "trying to do the job alone" as the cause of my accident. You said in your letter that I should explain more fully, and I trust that the following details will be sufficient.

I am a bricklayer by trade. On the date of the accident, I was working alone on the roof of a new six-story building. When I completed my work, I discovered that I had about 500 lbs. of brick left over. Rather than carry the bricks down by hand, I decided to lower them in a barrel by using a pulley that fortunately was attached to the side of the building at the sixth floor.

Securing the rope at ground level, I went up to the roof, swung the barrel out, and loaded the bricks into it. Then I went back to the ground and untied the rope, holding it tightly to ensure a slow descent of the 500 lbs. of bricks. You will note in block number 11 of the accident report form that my weight is 135 lbs.

Due to my surprise at being jerked off the ground so suddenly, I lost my presence of mind and forgot to let go of the rope. Needless to say, I proceeded at a rather rapid rate up the side of the building.

In the vicinity of the third floor, I met the barrel coming down. This explains my fractured skull and collarbone.

Slowed only slightly, I continued my rapid ascent, not stopping until the fingers of my right hand were two knuckles deep into the pulley.

Fortunately, by this time I had regained my presence of mind and was able to hold tightly to the rope in spite of my pain.

At approximately the same time however, the barrel of bricks hit the ground and the bottom fell out of the barrel. Devoid of the weight of the bricks, the barrel then weighed approximately 50 lbs.

I refer you again to the information in block number 11. As you might imagine, I began a rapid descent down the side of the building.

In the vicinity of the third floor, I met the barrel coming up. This accounts for the two fractured ankles and the lacerations of my legs and lower body.

The encounter of the barrel slowed

me enough to lessen my injuries when I fell onto the pile of bricks and fortunately, only three vertebrae were cracked.

I am sorry to report, however, that as I lay there on the bricks in pain unable to stand and watching the empty barrel six stories above me, that I again lost my presence of mind, and I let go of the rope. The empty barrel weighed more than the rope, so it came down upon me and broke both of my legs.

I hope I have furnished the information you required as to how the accident occurred.

### Tax Help

For assistance with completing your 1992 tax forms, you can telephone toll-free: 1-800-829-1040.

### FEMA Adds Emergency Publications

*This article appeared in the October 1992 issue of the Braille Monitor, published by the National Federation of the Blind.*

We have been asked to print the following: Three additional emergency public information booklets have recently been made available by the Federal Emergency Management Agency (FEMA) in formats accessible to visually impaired persons.

FEMA Director Wallace E. Stickney said the three publications are part of FEMA's commitment to provide emergency preparedness self-help information to all sectors of the American public.

The checklist for Emergency Preparedness: (L-154) provides general information for personal and family emergency preparedness to meet a variety of situations. "Your Family Disaster Supplies Kit" (L-189) lists tips on the types of resources to keep on hand should an emergency such as an earthquake or hurricane occur. "Emergency Food and Water Supplies" (FEMA-215) offers suggestions on life-sustaining foods and means of obtaining potable water if utilities break down.

The three pamphlets have been combined into one special publication available in Braille or on a single audio cassette. Copies of the "Emergency Preparedness Checklist" alone are also available on 16-2/3 rpm flexible soundsheets. FEMA plans to produce other public information materials in accessible formats in its ongoing effort to meet the requirements of the Americans with Disabilities Act.

To order, write to FEMA, P.O. Box 70274, Washington, D.C. 20024. To order all three publications on cassette or in Braille, ask for FEMA Publi-

cations L-154, L-189, and FEMA-215 combined, and specify format. Specify flexible soundsheet if you wish to receive the "Emergency Preparedness Checklist" (L-154) alone.



**Karen Mayry, immediate past president of the Diabetics Division, receives a well-deserved letter of recognition.**

#### Letter to a Leader

**From the Editor:** Karen Mayry is the immediate past president of our Diabetics Division. Through her work as president of the NFB of South Dakota, Karen serves as a role model to her blind and sighted peers. The following is a letter she received in recognition of her good work.

Department of Human Services  
Pierre, SD  
October 16, 1992

**Karen Mayry**  
Rapid City, SD

Dear Karen,

I read the article in the fall edition of the *Voice of the Diabetic* regarding your stepping down as the Division President after seven outstanding years of service. I want to congratulate you on the fine job you did in that capacity. South Dakota is proud to have citizens such as yourself who serve in positions of national prominence. Your advocacy and commitment continue to improve the lives of every citizen of this state who is blind and visually impaired. I look forward to our continued work together.

Sincerely,  
Grady Kickul  
Division Director

#### NFB Scholarships Program

With more than 50,000 members, the National Federation of the Blind (NFB) is the largest organization of blind citizens in existence. The NFB awards far more in scholarships than any other group or organization. There is a broad array of scholarships offered, ranging from \$2,000-\$10,000. A total of \$71,500 in scholarships will be awarded at the 1993 NFB convention, which will be held in Dallas, Texas. In addition to scholarships, total expenses will be paid for recipi-



**Peggy Pinder is an active federationist who serves as Chairwoman for the NFB Scholarship Program.**

ents to attend the annual convention of the NFB.

All scholarships are merit-based, and most are unrestricted. Basic eligibility requires the applicant to be legally blind and a full-time student in the Fall of 1993. Criteria by which entries will be judged are academic excellence, financial need, and service to the community. The committee which evaluates and chooses scholarship winners is composed of blind citizens from across the country, with distinguished community and academic backgrounds.

The National Federation of the Blind is an organization dedicated to creating opportunity for all blind persons. Recipients of Federation scholarships need not be members of the National Federation of the Blind.

We have received approximately 500 scholarship applications each year. Applications must be received by March 31, 1993. Anyone interested may request and receive as many application forms as desired from:

1. National Federation of the Blind Scholarship Committee Chairwoman, Peggy Pinder, 814 4th Avenue, Suite 200; Grinnell, Iowa 50112; telephone: (515) 736-3366.
2. The National Federation of the Blind, Scholarship Committee; 1800 Johnson St.; Baltimore, MD 21230; telephone: (410) 659-9314.
3. All NFB affiliate presidents.

The NFB Scholarship program for blind students is great. Remember, applications must be received by March 31, 1993, so get your applications in!

#### Braille Calendars

The American Brotherhood for the Blind is offering, free-of-charge, an attractive 1993 calendar in Braille. Just write to the American Brotherhood for the Blind, 1800 Johnson Street, Baltimore, MD 21230.

#### Tracing Service

*We have been asked to print the following:* Did you lose a relative during the Holocaust? Do you want to verify a family member's death? Do

you need certification for reparation or pensions for survivors? Are you looking for missing relatives? Now that the Soviets have opened their war archives containing valuable records, a new Holocaust and war victim Tracing Service has been established by the American Red Cross. To assist the blind and all handicapped in completing the Red Cross inquiry form, the Jewish Heritage for the Blind provides instructions in Braille and large print and provides information on scheduling appointments with a Red Cross volunteer. THERE IS NO CHARGE FOR OUR SERVICE. For FREE information send a stamped self-addressed envelope to: The Jewish Heritage for the Blind, Tracing Service, 1655 East 24th Street, Brooklyn, NY 11229.

#### Volunteer Payees

*This article appeared in the October 1992 issue of the Braille Monitor, published by the National Federation of the Blind.*

#### Social Security Report

##### Social Security Beneficiaries Need Volunteer Payees

When most people receive their Social Security and Supplemental Security (SSI) benefits directly, some people need assistance in managing their finances. Benefits to these individuals are paid through representative payees who receive the checks on behalf of the beneficiaries and provide for their personal needs.

The process of assigning a representative payee begins when Social Security is made aware that a beneficiary cannot handle his or her own benefits. Usually, this occurs when another person applies for benefits on the beneficiary's behalf.

In each case, medical or other evidence must establish that the beneficiary is not capable of managing his or her own benefits before a representative payee will be assigned. For many beneficiaries, a family member or friend serves as the payee. But for a growing number of individuals, no one is available to fill this role. In an effort to ensure that beneficiaries who are unable to handle their own finances have qualified representative payees to act in this capacity, the Social Security Administration is recruiting organizations with a base of responsible volunteers.

For groups interested in pursuing payee programs or for more information about Social Security, we have produced an educational closed-captioned video, "Serving as a Representative Payee." For more information, please call or write to: Louise Ross, Office of Public Affairs, Social Security Administration, P.O. Box 17743, Baltimore, MD 21235; (410) 965-4031.

#### New Pamphlet

The Diabetics Division of the National Federation of the Blind now has a new pamphlet titled "Diabetes,

Complications, Options." This pamphlet is attractive and explains our outreach programs. The publication disseminates essential information and reaches out to anyone who has an interest in diabetes and blindness.

Unlimited free copies are available to anyone interested in helping to spread the word. The new pamphlet is great for libraries, pharmacies, physicians' offices, hospitals and so on. "Diabetes, Complications, Options" may be ordered from: The National Federation of the Blind, Materials Center, 1800 Johnson Street, Baltimore, MD 21230; telephone: (410) 659-9314.

#### Articles Needed

If you are a health professional, a person with diabetes, a family member, or friend of a diabetic, we invite you to submit an article for publication in the *Voice of the Diabetic*.

If you have diabetes, have you experienced a diabetic complication? If so, your story can be inspiring and enlightening for thousands of men and women who may be facing the same side effect(s).

One of the goals of the Diabetics Division of the National Federation of the Blind is to show people that they have options regardless of diabetic complications. Are you blind or losing vision? Have you had a kidney transplant? Do you have nerve damage? Have you had an amputation? None of these problems has to be overwhelming. It is helpful to know that others have been down the same road.

If you have doubts about your writing ability, please do not worry. If major changes are needed, you will be contacted before the story is used in the *Voice*.

All submissions to the *Voice* must be upbeat, because our philosophy regarding diabetes is positive. For information and article submission guidelines, contact: Ed Bryant, Editor, *Voice of the Diabetic*, 811 Cherry St., Suite 309, Columbia, MO 65201; telephone (314) 875-8911.

#### Voice Distributors Needed

Since the *Voice* is now offered free, our Diabetics Division will provide extra copies to anyone wanting to help spread the word. We will gladly send from five to five hundred copies each quarter to be used as free literature. Medical facilities can order as needed for patients. Individuals can usually place *Voices* in libraries, pharmacies, hospitals, doctors' offices, or any location of public patronage.

Education is essential and by distributing the *Voice*, anyone interested in diabetes will be enlightened about the disease and its ramifications. People with diabetes and their families learn that diabetics have options and where to go for information. If you would like to help spread the word by distributing the publication, please contact Ed Bryant, Editor, 811 Cherry St., Suite 309, Columbia, MO 65201; telephone (314) 875-8911.

## Update: Insulin vial configurations would eradicate errors

(Continued from page 4)

As for alternatives to my combination of different vial configurations (indicating source), there are many possibilities. The blind rehabilitation teacher suggested that duration could be indicated by tactile cues in the forms of letters R, N, L, etc. She also said she would like to have *duration* indicated as it once was — in differently shaped bottles.

Another alternative might be differently shaped vials combined with raised letters (R, N, L, etc.), plus other tactile cues indicating source as suggested in the above chart.

Whatever distinguishing marks are used, including different vial shapes, the first priority must be *duration* indications.

To repeat, any kind of tactile indications must be simple and easy to determine in order to circumvent errors. Consumer confusion will not occur if markings are simple.

Color coding should definitely not be used. As my survey and the letter from the rehabilitation teacher indicated, color labels would not help the thousands of blind diabetics and would only serve to confuse those with sight. (Consider sighted persons who are color blind.)

I believe that my suggestions address your specific questions regarding alternatives, coding methods, and the products used in each category of short, intermediate, and long-acting insulins. You also wanted to know if labels should be used on all vials, or only by special request. LABELS SHOULD BE USED ON ALL VIALS AND NOT BY SPECIAL REQUEST. I imagine specially marked labels would be outrageous in price. In my contact with thousands of insulin-dependent diabetics, both blind and those losing vision, I find the vast majority are independent and do not want, nor do they need, to order special request labels on their insulin vials. Furthermore, my whole proposal is in regard to a universal system that would eradicate dispensing and dosing errors and the need for special request labels.

One insulin manufacturer indicates that such changes would not be a major problem. However, the other manufacturer didn't seem to be as receptive to change even though that company claims to have tactile coding on one of its products. While that company has considerable vested interests outside the United States, our concern should be directed to insulin-using Americans.

I request that prototypes be sent to me for examination. Furthermore, I ask that an additional 30 to 50 sets of prototypes be sent to me for distribution to knowledgeable long-term blind diabetics for their opinions. I would very much appreciate having copies of the revision of the CFR and views by various agencies when they be-

come available as well as the proposed dates when public comments will be solicited.

I am very much in favor of the suggestion you made regarding the possibility that tactile markings be voluntarily implemented by manufacturers before the CFR regulations are amended, and later codified in the regulations as requirements.

As editor of the *Voice of the Diabetic*, I am keeping readers apprised of developments regarding changes in these matters. Thousands of diabetics are concerned about the issue and look forward to being able to readily determine what insulin they are using when the changes become a reality.

Thank you for requesting my suggestions and for expressing your sincere interest in this problem. Don't hesitate to contact me with specific questions or comments. I, along with

other members of the Diabetics Division of the National Federation of the Blind, am willing and eager to help you in any way I can. I look forward to hearing from you.

Most sincerely,  
Ed Bryant  
Editor, *Voice of the Diabetic*  
First Vice President, Diabetics  
Division

As part of the review process, comments from the public will be solicited by the FDA before making any changes. I urge readers to consider the issue and begin preparing comments to send to the FDA. Meanwhile, updates will appear in the *Voice* as information becomes available. I would appreciate any and all comments or suggestions from *Voice* readers.

## ADVERTISERS

Effective advertising doesn't scream at its audience. It persuades. It sells. The key to cost-effective advertising is making your voice heard where an audience is already listening. *Voice of the Diabetic* offers such an outlet. Make your voice heard. For advertising information contact:

Voice of the Diabetic  
Ed Bryant, Editor  
811 Cherry Street, Suite 309  
Columbia MO 65201  
(314) 875-8911

## Subscription/Donation Form

The *Voice of the Diabetic* is a quarterly magazine published by The Diabetics Division of the National Federation of the Blind (NFB) for anyone interested in diabetes, especially diabetics who are blind or losing vision. It is an outreach publication emphasizing good diabetes control, diet and independence.

Donations are gladly accepted and appreciated. Contributions are not only tax deductible but are needed to keep the *Voice* and the Diabetics Division moving forward to help people with all aspects of diabetes.

Members of the NFB Diabetics Division enjoy priority services and unique benefits such as a continuous free subscription to the *Voice*, automatic access to committees covering all aspects of diabetes, free counseling concerning all facets of blindness and diabetes as well as access to diabetics who have experienced complications.

The *Voice* is free to any interested person upon request. Each subscription costs the Diabetics Division approximately \$20 per year. To help defray publication expenses, members are invited, and nonmembers are requested, to cover the subscription cost.

### To begin receiving the *Voice*, please check one:

I would like to become a member of the NFB Diabetics Division and receive the *Voice of the Diabetic*. (Members are entitled to special membership benefits.)

I would like to receive the *Voice of the Diabetic* as a nonmember. (Nonmembers are encouraged to pay the institutional rate of \$20/one year; \$35/two years; \$50/three years.)

Send the *Voice* in (check one):

print       cassette tape for the blind and physically handicapped (recorded at slower-than-standard speed of 15/16 IPS)       both

Optional check this box:

I would like to make (or add) a tax-deductible contribution of \$ \_\_\_\_\_ to The Diabetics Division of NFB.

Please print clearly

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) \_\_\_\_\_

Send this form or a facsimile to:

*Voice of the Diabetic*, 811 Cherry St., Suite 309, Columbia, MO 65201

Please make all checks payable to:  
**NATIONAL FEDERATION OF THE BLIND**